







United States Department of the Navy
Atlantic Division, Naval Facilities Engineering Command

10 - 20 February 2003

Designers

Value Engineering Consultants





Lewis & Zimmerman Associates, Inc.



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Lewis & Zimmerman Associates, Inc.

Taking the Chance Out of Change

March 11, 2003

Ms. Laurie D. Neitzke, PE Project Manager Naval Facilities Engineering Command Atlantic Division, Code CI27 1510 Gilbert Street Norfolk, Virginia 23511-2699

re: FACD Workshop Report

P-995 – Waterfront Recapitalization Project, Santo Stefano

Dear Ms. Neitzke:

We are pleased to submit all 15 copies of this electronic Function Analysis Concept Development (FACD) workshop report. This workshop was highly effective in helping the designers identify the very specific requirements of the end-users of the project. In addition, the FACD approach served as a vehicle for negotiating with the various agencies that had competing needs for the extremely limited space on the project site. The basic goals of all FACDs were met in a timely manner, i.e., to develop a concept that is within the dollar and square footage scopes, and which meets the functional requirements of the end users.

There were over 40 one-on-one interviews with end-users conducted by the design team. There were four concept presentations and four special purpose presentations performed by the designers and LANTDIV project delivery team. The design team, LANTDIV representatives, and LZA facilitators worked a total of over 1500 hours to mold the design into the functional concept finally approved.

Thank you for your help with this workshop. We trust you will find this report to be an accurate accounting for the work performed. Should you have any questions, please feel free to give me a call.

Yours very truly,

LEWIS & ZIMMERMAN ASSOCIATES, INC.

Charles R. McDuff, PK, CVS, CCI

Vice President

Attachment

cc: S. Bowe, LANTDIV

D. Boldt, RLF

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P-995 WATERFRONT RECAPITALIZATION - SANTO STEFANO Naval Support Activity La Maddalena, Sardegna Function Analysis Concept Development, 10-20 February 2003

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COMMENTS ON FINAL CONCEPT



PROIECTS: P-995 – WATERFRONT RECAPITALIZATION, Santo Stefano

Function Analysis Concept Design(FACD) **COMMENTS BY: Participants DATE: 20 February 2003 ITEM** PROJECT DEVELOPMENT TEAM NO. **COMMENT RESPONSE** How long will the Fleet Recreation Center be out of service due to 1 Approximately one year. However, construction? --- Jim Anderson, MWR as the design moves forward, it might be possible to creatively produce some substitute arrangements to meet some of the normal functions of the Fleet Recreation Center. 2 It might be possible to use a portion of the Italian site area to facilitate Acknowledged. This is already construction. tactfully being explored as a possibility. 3 It is highly desirable to reduce the construction duration to below 42 Acknowledged. Construction scheduling will be looked at in depth months. in order to try to accomplish this goal. 4 The outstanding issues were reviewed with the participants. It appears that assignments are in place to address each of the outstanding issues in a timely manner.

SECTION 2 - EXECUTIVE SUMMARY

INTRODUCTION

A Function Analysis Concept Development Workshop (FACD) for the NSA La Maddalena Waterfront Recapitalization Project (P-995) was held at the Hotel Villa Del Parco, La Maddalena, Sardinia, Italy, from 10 February through 20 February 2003 The goal of this workshop was to develop a design concept that can be constructed within or below the budget, within the allowable square foot floor area, and meet the users' functional needs. The basic workshop approach uses function analysis techniques to bring the owners and users into the design process and incorporate their needs into the concept design so the design effort can progress to the 35% stage and meet the above-stated goals.

One of the chief components of the FACD workshop process is to aid the U.S. Navy in minimizing the impact on available resources and avoid commitments to short and long-term life cycle recurring costs, where possible. The following are some of the items incorporated into the design to help reduce life cycle costs and meet sustainable design goals:

- 1. Improve performance of current mission
- 2. Respect Parco Nazionale Arcipelago La Maddelena
- 3. Provide increased Anti-terrorism / Force Protection
- 4. Provide Security
- 5. Enhance the quality of life
- 6. Provide Sustainability
- 7. Achieve LEED recognition by LANTDIV
- 8. Meet / Exceed code requirements (U.S. and Italian)
- 9. Conform to 11 meter maximum building height requirement.
- 10. Separate pedestrian and vehicle traffic

KICK-OFF MEETING

The kick-off meeting, conducted Monday 10 February 2003, included an introduction of all participants, an overview of the FACD process, and remarks by the Commanding Officer, NSA La Maddalena and LANTDIV project manager. Italian code requirements and special issues for the location were reviewed by Engineering Field Activity, Mediterranean (EFAMED).

The Design Team from Rogers, Lovelock and Fritz Inc. (RLF) reviewed the space program elements and the authorized budget for the project. The existing site and facilities configurations were reviewed and special conditions and challenges were delineated. Authorized space totals 8091 gross square meters (GSM) including spaces for Port Services, Fitness Facility, Bachelor Quarters, Dining Facilities, General Warehouse and Hazardous Materials spaces. Additionally, 200 GSM is authorized for a Small Craft Berthing Pier. Two additional diesel generators are to be added to the Cold Iron Support capability. The project will also provide upgrades to the existing wastewater treatment plant (WTP). The authorized

amount for the Estimated Cost of Construction (ECC) is \$32.7 Million.

DESIGN EVOLUTION

After the kickoff meeting and presentation of Concept 1, the follow-on design concepts evolved progressively through three additional iterations in response to end user and other activity representatives' comments. In addition, there were a series of discussions with the end users, base technical representatives, and the LANTDIV project management team. These additional discussions and meetings afforded further understanding of the needs, wants, and criteria issues. The results of this process led to the Final Concept presented in Section 3 of this report. The following are brief descriptions of the process and resulting three design concepts that made up the effort of the workshop:

Preliminary Considerations

The recapitalization project for the NSA La Maddalena has unique design challenges and issues because the facility is located on the island of Santo Stefano in the La Maddalena Archipelago Italian National Park (Parco Nazionale Arcipelago La Maddalena). The site is a long narrow property bounded on one side by the sea and on the other sides by the national park property. Usable space is limited to the existing boundaries of the facility with very little or no opportunity to remove existing rock or add building or road area at the water line. Building height is limited to 11 meters.

There were several factors that made it difficult to arrive at clear conclusions for the project. First of all, the site is very small and has further limitations imposed on it due to the fact that the site is situated on National Park lands for Italy. There are very challenging design parameters due to the need to accomplish Anti-Terrorism and Force Protection goals. There are 10 different user groups whose working space needs became competing requirements due to the tight site.

The 10 user groups involved in this project are: Supply, MWR, Port Services, Squadron, NCIS, ISD, Security, Environmental, Safety/Fire Marshal, and Public Works.

Concept 1

The design presented at Concept 1 was derived from the original DD Form 1391 for the project and knowledge gained from pre-FACD design meetings. The primary facilities for this project included:

- Port Services (Administrative and Operational Facilities)
- Hazardous and Flammable Materials Storage
- General Warehouse
- Dining Facility
- Fleet Recreation
- Fitness Center
- Transient Bachelor Quarters
- Small Craft Berthing Pier

- Support Facilities
 - o Diesel Generators
 - Utilities
 - Site Improvements

In order to make way for the construction of this project, it is necessary to demolish seven existing buildings. Concept 1 called for the construction of three new buildings and small craft berthing facilities. The new buildings were identified as:

- Building "M" (MWR) Fitness, BEQ, Fleet Recreation and Dining
- Building "C" Central Energy Building
- Building "W" (Warehouse) Port Services, Haz-Mat and Warehouse

The Concept 1 design very nearly achieved the programmed space authorized and was estimated to cost less than the authorized amount. The designed space totaled 8143 GSM versus 8091 GSM authorized and was estimated to cost \$31.18 million as compared to \$32.7 authorized ECC.

Significant issues raised, as a result of the Concept 1 presentation, included:

- Phasing of the project. Continued operation of the ship supply functions will require a change from the Concept 1 plan of a single phase for the land side project and a single phase for the water side of the project.
- Extent of rock removal at the southwest corner of property.
- Extent of areas that require sprinklers for fire protection
- Access requirements to rear of buildings
- AT/FP issues specific to the La Maddalena site
- Anchorage of the Dunlop barriers
- Noise control from the new diesel generators.
- Exterior of architectural design

Concept 2

Key members of the project and design team met on 13 February 13, 2003 at 0800 with the Commanding Officers of NSA La Maddalena and COMSUBRON 22 to review and discuss Concept 2. The Concept 2 Presentation was held on 13 February 2003 at 1000 at Hotel Villa Del Parco. At the time of Concept 2, the designed program area was within budget at 8049 GSM designed as compared to 8091 GSM authorized. The estimated Cost of Construction as designed was \$32.73 million as designed compared to \$32.70 authorized.

Concept 2 was developed from the original concept presented on Monday, the 10th of February. The original concept was modified as necessary to address the comments received in 15 separate working sessions with the end-users and stakeholders. The Second Concept included making the construction phasing clearer and much more workable than in the original concept presentation. There were five total construction phases identified, with a total of eight sub-phases.

Among the most important differences between the Initial and the Second Concept was the

relocation of the new Central Energy Building (CEB) from the line of buildings to a location nearer the water. This move eliminated a major issue at the time of Concept 1, i.e., the requirement to excavate rock at the southwest corner of the property. This relocation allowed for full size recreational spaces to be designed for Concept 2 but raised concerns about the space available for the Conex containers used by Port Services, presently located where the CEB would be built. Other concerns raised as a result of the Concept 2 presentations included location of the safety office, the need to add an office for the newly designated site liaison officer, and the location and configuration of the Squadron conference room.

Concept 3

The third concept accomplished several important goals. First, the planned construction phasing was reworked to incorporate emerging understandings of the tight site on contractor operations and availability of buildings for demolition. In this scheduling effort, it was determined that the total construction duration would be approximately 61 months.

In general, the remainder of the changes dealt with fine tuning the design to balance the competing needs of the end users against the authorized space and dollars. Concept 3 indicated that the design was 63 GSM over the allowable of 8,091 GSM. It was expected that the Final Concept would easily address this slight floor area problem by reducing the covered walkway areas. Similarly, the ECC was \$30,000 over the allowable of \$32.7 million. It was expected that this would be easily dealt with in preparing the Final Concept.

An important part of the preparation of the Final Concept was to be the identification of approximately \$1.70 million (5.00%) in bid options to maximize the chances for positive positioning during the bid process.

Final Concept

The final concept is detailed in the Section 3 of this report. It should be noted that the final concept is on target with regard to programmed square footage and cost.

FINAL PRESENTATION AND ENDORSEMENTS

On the 20th of February the RLF design team made the fourth and final presentation of the design concept. This final concept was found to be acceptable by Commanding Officer of NSA LaMaddalena and the various end-users. In response, the key FACD participants signed off on the endorsement document that is enclosed in Section One of this report. This formally closed out the on-site work of the project delivery team. The next site visit is expected to be in conjunction with the 35% design review.

SUSTAINABLE DESIGN AND LIFE CYCLE COST REDUCTION

The project delivery team from LANTDIV requested that the designers incorporate into their design the goal having the project rate as high as possible on the LEED Certification score sheet. It is quite difficult to achieve a high rating on projects of this sort, that is highly industrial and on a tightly constrained, existing site. However, the designers have been able

to apply many of the techniques suggested by the U.S. Green Building Council (USGBC). The Energy Conservation/Sustainable Design efforts are documented in Section 4 of this report entitled, "Abbreviated Basis of Design."

OUTSTANDING ISSUES

It is not unusual for there to be issues needing additional attention at the end of a FACD workshop. This typically happens due to time constraints. In the case of this workshop, there were four issues that will require resolution:

- Design Parameters for the Site Buildings due to explosive arc associated with
 munitions handling in the port. OPEN ISSUE The site currently operates under an
 exemption that will expire on 30 November 2004. An application requesting renewal
 of the exemption was denied because P-995 is replacing a significant portion the
 existing facilities. It was determined by Rick Adams, of NOSSA, that a Secretarial
 Certification is more appropriate for the site. The Secretarial Certification application
 is being prepared by Bruce Farmer of NSA LaMaddalena, Public Works Department.
 The effects of the arcs will be unknown until input from DDESB and NOSSA is
 received
- Anti-Terrorism/Force Protection impact on design. **OPEN ISSUE** AT/FP issues evaluated and resolved. Deviation/Waiver for OPORD and UFC required.
- Location for mooring of contractor barges. **OPEN ISSUE** Contractor laydown areas are expected to be on contractor-supplied barges. Must yet work with Port Services to identify anchorage locations for contractor barges during construction.
- Need to work out the architectural treatment for the building exteriors. This is a sensitive issue due to adjacency with National Park. **OPEN ISSUE** Will receive input from SBA and other Italian representatives as part of resolving this issue

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DD Form 1391

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5.Program Eleme		ategory Code 964	7.	Project P995	Number	8. Pro	oject Cost (\$000) 39,020

Overall cost was rounded to \$37,000,000 during final lock. NAVFACHQ adjustments made unit costs to match budget book print program.

10. Description of Proposed Construction

This project will eliminate numerous anti-terrorism/force protection (AT/FP) criteria violations at NSA La Maddalena and will focus on operational and ship support facilities that support the homeported submarine repair ship, USS Emory S Land.

The project will construct separate and useable facilities to include a new Port Services building, Fitness Center and Fleet Recreation Center, Hazardous Materials/Waste Storage Warehouse, Transient Bachelor Quarters (24 - 2+0 modules), Dining Facility, and General Warehouse. The project will also construct a small craft-berthing pier. It will also add two diesel generators to the existing Cold Iron support capability and construct a sound-baffling wall around all generators. The project will provide environmental upgrades to the existing wastewater treatment plant (WWTP). These facilities will be concrete and/or steel framed construction, heated and cooled, and provided with fire protection including sprinklers, alarm and detection system, connections to the NSA La Maddalena utility system and will incorporate handicap criteria. Construction of these facilities will be on spread footings, with cast-in-place concrete walls, concrete and structural steel roof structures, and modified bitumen roof systems.

All buildings will be designed in accordance with Italian and U.S. seismic, building, fire and ventilation codes and the latest Department of Defense and European Command anti-terrorism/force protection (AT/FP) standards and criteria.

Built-in equipment includes 24 kitchenettes in the Bachelor Enlisted Quarters, three elevators, frequency converter, lightning protection, port services equipment upgrade from typical squadron operations facility, roof and wall upgrade from typical squadron operations facility, and special grounding.

Demolition is provided for twelve existing facilities, Buildings 2 (436 m2), 3 (1176 m2), 4 (880 m2), 9 (60 m2), 12 (388 m2), 13 (417 m2), 14, (579 m2), 17 (46 m2), 18 (31 m2), 20 (65 m2), 22 (95 m2), 104 (866 m2). The new Port Services Building will provide ashore facilities for functions presently provided afloat on the Berthing Barge. With new facilities ashore, the Berthing Barge will be removed from the Santo Stefano waterfront,

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5.Program Eleme	ent	6.Category Code 15964	7.	Project Number P995	8. Pro	oject Cost (\$000) 39,020

thereby increasing the facility disposal total by 3440 m2. Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123 and other laws and Executive Orders.

11.	Requirement:	<u>LS</u>	Adeq	uate:	<u>LS</u>	Substandard:	<u>LS</u>
	CILITY PLANNING DATA egory Code	Requirement	UM	Adequate	Substandard	Inadequate Defi	.cit/Surplus
155	20 SMALL CRAFT	200	mB	0	0	0	-200
	BERTHING						
740	44 INDOOR PHYSICAL	1666	m2	0	0	0	-1,666
	FITNESS FACILITY						
721	11 BACHELOR ENLISTED	1152	m2	0	0	0	-1,152
	QUARTERS E1/E4						
722	10 ENLISTED DINING-	868	m2	0	0	0	-868
	FACILITY						
730	20 POLICE STATION		m2				
441	10 GENERAL WAREHOUSE	857	m2	0	0	0	-857
441	30 HAZARDOUS&FLAMMABL	442	m2	0	0	0	-442
	ES STOREHOUSE						

NOTES:

SCOPE:

PROJECT:

Project will reconstruct the ship support facilities at the waterfront area of NSA La Maddalena.

(Current Mission)

REQUIREMENT:

Adequate waterfront support facilities are required for NSA La Maddalena's mission is provide all necessary support to the homeported USS Emory S. Land, which is berthed on the small island of St. Stefano. Facilities on St. Stefano are limited to those that directly support repair ship operations and its crew. Remaining support and housing functions are located in leased facilities on the island of LaMaddalena, approximately two miles from the ship's berth.

The bachelor enlisted quarters will support sails from visiting submarines. Transient berthing areas are required for sailors who 'hot rack' while submarines is underway. Submariners must stay at St. Stefano because travel times to the island inhibit operational readiness requirements. Waterfront support facilities required at St.

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Stefano include Port Services building, Fitness Center, Hazardous Material and Waste Storage Warehouse, Bachelor Quarters, Dining Facility, and General Warehouse. These facilities will support visiting submarines and ships. The 700 people assigned to the tender, the 150 port operations people and everyone assigned to La Maddalena (no civilians, no dependents). A Small Craft Berthing Pier is also required along with adequate Cold Iron support capability to support homeported and visiting submarines and also provide downtime for each generator to conduct necessary periodic maintenance.

CURRENT SITUATION:

Facilities at St. Stefano are largely inadequate due to size and condition and do not conform to Department of Defense or European Command anti-terrorism force protection criteria. The small craft berthing requires an additional 200 linear meters. All warehouses, shops and the mess hall are inadequate and require demolition and replacement. The port services spaces and submariner berthing spaces are currently located on a Berthing Barge which is inadequate and will be removed from St. Stefano and replaced with adequate facilities ashore. The existing Cold Iron support is undersized and provides no down time for maintenance of generators.

IMPACT IF NOT PROVIDED:

If not provided, the 1,254 homeported sailors assigned to the repair ship homeported at St. Stefano will continue to be stationed at what is considered a hardship tour site. The force protection conditions at La Maddalena are Chief of Naval Forces Europe's most serious anti-terrorism force protection challenge. If not provided, AT/FP requirements cannot be met. The quality of life at St. Stefano is inadequate due to 1970's style facilities and lack of needed personnel support features such as an indoor fitness center with fleet recreation functions. These are particularly significant at St. Stefano because the extremely small site does not provide any outdoor recreation.

Additionally, If not provided, the existing Cold Iron facility will be operated at a rate that does not allow periodic preventive maintenance.

ADDITIONAL: Economic Alternatives Considered:

a. Status Quo:

Although the status quo appears to be the best economic solution, it is unacceptable with respect to Life, Safety, Health and Anti-terrorism/Force Protection issues.

The aging facilities have many disadvantages. They are decrepit, rundown and require significant continuing maintenance and repair to keep them minimally functional. They lack important life safety features such as fire protection and seismic design. They lack adequate storage areas and, as a consequence materials are stored outdoors. The

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existing facilities cannot be upgraded to meet AT/FP criteria and therefore continue to put sailors at risk.

The lack of adequate shore facilities requires that Commander In Chief Atlantic Fleet locate a berthing barge to provide sailor berthing, small craft berthing port services and maintenance functions. Sailors are bunked four high and conditions are very cramped. The use of an afloat asset to duplicate shore facilities is extremely costly with high maintenance and large operating staff. There are high secondary costs associated with continuing to operate in a situation considered as hardship duty. These include reduced retention of sailors assigned to the submarine repair ship and NSA La Maddalena and increased basic and advanced training for new recruits required to replace sailors leaving the Navy.

The lack of Cold Iron capability requires NSA to bring MUSE generators from California every three years. The new construction includes the \$550,000 cost for two new diesel generators to be added to the existing Cold Iron Support capability.

b. Renovation/Modernization:

The facilities at St. Stefano are beyond their useful life and are not suitable for renovation. They cannot be made to meet seismic and AT/FP criteria without demolishing and replacing with new construction.

c. Lease:

The isolated nature of the small island precludes private leasing.

d. New Construction:

This is the best economic solution.

e. Other Alternatives:

No other options are available at La Maddalena.

f. Analysis Results:

New construction is the recommended alternative.

12. Supplemental Data:

12. Duppiemental Data.
Site Approval :
Yes, obtained date :
X No, expected approval date: 112002
Issues (If yes, please provide discussion under issue) : Yes No
X DDESB, AICUZ, Airfield, EMR, or wetlands

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	h Master Plan or Base/Regio	nal Development							
Host Nation Approval : X Required Approval Date: 092003 Expected Date: Not Required									
National Capital Region Approval: Required Approval Date: Expected Date: X Not Required NEPA Documentation: Complete: Yes X No									
Environ	rical Exclusion nmental Assessment (EA)	TC)							

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	ndum of es: ds replous was inated leanup Date: d: safet - foun ruction air quites wit reece) Acquisitional Population of the control of the	mand Location/UIC: N32960 MADDALENA IT ARDINIA IT ent 6.Category Code 15964 modum of Negative Decision es: ds replacement/enhancement ous waste chated soil/water leanup: Date: dd: m safety - foundation and seismic of cuction/operational permits air quality/wastewater per des with Final Governing St recee) Acquisition (i.e. location, dcal Operating Manuals collity/Constructibility in cical Preservation cal Security: Fencing IDS Other Type: SCIF Shielding hysical Security Summary Sheet:	mand Location/UIC: N32960 MADDALENA IT ARDINIA IT ent 6.Category Code 15964 ndum of Negative Decision es: ds replacement/enhancement ous waste dinated soil/water leanup: Date: dd: m safety - foundation and seismic conditinuction/operational permits air quality/wastewater permits air quality/wastewater permits les with Final Governing Standard meece) Acquisition (i.e. location, quant local Operating Manuals collity/Constructibility in FY mical Preservation cal Security: Fencing IDS Other Type: SCIF Shielding hysical Security Summary Sheet: UM	and Location/UIC: N32960 MADDALENA IT ARDINIA IT ent 6.Category Code 15964 Toped 7. Project Number 15964 and replacement/enhancement ous waste inated soil/water leanup: Date: dd : asafety - foundation and seismic conditions: rection/operational permits air quality/wastewater permits air quality/wastewater permits air quality/wastewater permits air quality/construction (i.e. location, quantity) and the companion of the co	MADDALENA IT ARDINIA IT ent 6.Category Code 15964 7. Project Number P995 Indum of Negative Decision es: ds replacement/enhancement ous waste dinated soil/water leanup: Date: d : In safety - foundation and seismic conditions: ruction/operational permits air quality/wastewater permits less with Final Governing Standard(Environmental standard forece) Acquisition (i.e. location, quantity) Acquisition (i.e. location, quantity) Acquisition Preservation all Security: Fencing IDS Other Type: SCIF Shielding hysical Security Summary Sheet: UM Quantity Unit Come.			

1.Component NAVY	FY 2	004 MILIT	TARY CO	NSTE	RUCTION P	ROGRA	MA	2.Date 22 AUG 2002	
3. Installation and Location/UIC: N32960 NAVSUPPACT LAMADDALENA IT LAMADDALENA SARDINIA IT 4. Project Title CONSOLIDATE SANTO STEFANO FACILITIES									
5.Program Eleme	ent	6.Category 15964	Code	7.	Project Nur P995	mber	8. Pro	ject Cost (\$0 39,020	000)
<u> Item</u>			<u>UM</u>		Quantity	Ţ	Unit Cos	t <u>Tot</u>	<u>al</u>
BUILT-IN EQUIPM	ENT		LS		1.00			2,336,2	00
BEQ Kitchenette	es		EA		24.00		6,300.0	0 151,2	00
Elevators			EA		3.00	-	90,900.0	0 272,7	00
Frequency Conve	erters		LS		1.00	,	73,000.0	0 73,0	00
HazMat Warehous	se		LS		1.00	3	45,000.0	0 345,0	00
Lightining Prot	ection		LS		1.00	(65,000.0	0 65,0	00
Port Services, typ Squad Ops F		upgrade fr.	LS		1.00	30	67,000.0	0 367,0	00
Roof upgrade fr const	. typ	Squad Ops	LS		1.00	20	62,000.0	0 262,0	00
Special Groundi	ng		LS		1.00		7,300.0	0 7,3	00
Wall upgrade fr const	typ	Squad Ops	LS		1.00	79	93,000.0	0 793,0	00
Special Construc	ction F	eatures:							
<u> Item</u>			<u>UM</u>		Quantity]	Unit Cos	t Tota	<u>al</u>
ANTI-TERRORISM/	FORCE E	PROTECTION	LS		1.00			1,130,0	00
Force Protecti feet)	on (In	side 5	LS		1	1,1	30,000.0	0 1,130,0	00
INFORMATION SYS	TEMS		LS		1.00			220,0	00
Information Sy	stems		LS		1	2	20,000.0	0 220,0	00
TECHNICAL OPERA	TING MA	ANUALS	LS		1.00			250,0	00
Techical Opera	iting M	anuals	LS		1	2	50,000.0		
Utilities and Si	ite Imp	rovements:							
<u>Item</u>	-		<u>UM</u>		Quantity]	Unit Cos	t Tota	<u>al</u>
DEMOLITION			LS		1	1,0	00,000.0	0 1,000,0	00
Site & Buildin	g Demol	ition	LS		1	7	20,000.0	0 720,0	00
NAVFAC Increas	е		LS		1	2	80,000.0	0 280,0	00
MECHANICAL UTI	LITIES		LS		1	9	00,000.0	0 900,0	00
Fire Protection			LS		1		64,000.0		
								·	

DD Form 1391 C

1 Dec 76

1.Component NAVY	FY 2	2004 MILITAR	Y CONST	RUCTION	PROGR	AM	2.Date 22 AUG 2002	
3. Installation NAVSUPPACT LA LAMADDALENA S	MADDAL	ENA IT	32960	4. Project Title CONSOLIDATE SANTO STEFANO FACILITIES				
5.Program Eleme 0204896N	ent	6.Category Cod 15964	le 7.	Project 1 P995	Number	8. Pro	ject Cost (\$000) 39,020	
<u>Item</u>		<u>UM</u>		Quantity	<u>z</u>	<u>Unit Cos</u>	st <u>Total</u>	
Sanitary Sewer		LS			1 1	54,000.0	154,000	
Water Distribu	tion	LS			1 3	60,000.0	360,000	
NAVFAC increas	e	LS			1 2	22,000.0	222,000	
ELECTRICAL UTI	LITIES	LS			1 1,0	95,000.0	1,095,000	
Area Lighting		LS				45,000.0		
Berthing Pier	Distrib					40,000.0		
Electrical Tra	nsforme	ers LS			1	50,000.0	50,000	
Primary Distri	bution	LS			1	60,000.0	00 60,000	
Diesel Generat	ors	LS			1 5	50,000.0	550,000	
Communications		LS			1 1	65,000.0	165,000	
Secondary Dist	ributio	on LS			1	95,000.0	95,000	
NAVFAC ADJUSTM	ENT	LS			1	90,000.0	90,000	
SITE IMPROVEME	NTS	LS			1 2,5	00,000.0	2,500,000	
FMB control		LS			1 -	90,000.0	90,000	
Fencing		LS			1	60,000.0	00 60,000	
Earthwork		LS			1 4	90,000.0	490,000	
sustainable de	sign	LS			1 8	90,000.0	890,000	
Landscaping		LS			1	10,000.0	10,000	
Storm Drainage		LS			1 1	20,000.0	120,000	
Retaining Wall		LS			1 1	30,000.0	130,000	
NAVFAC ADJUSTM	ENT	LS			1 8	90,000.0	890,000	
WWTP ENVIRONME	NTAL UF	PGRADES LS			1 1,3	70,000.0	1,370,000	
Compliance Upg	rades	LS			1 1,3	70,000.0	1,370,000	
CONCRETE PAVEM	ENT	LS			1 9	00,000.0	900,000	
New Site Pavem	ent & C	Concrete LS			1 4	80,000.0	10 480,000	
Plant								
NAVFAC Adjustm	ent	LS			1 2	60,000.0	260,000	
NAVFAC ADJUSTM	ENT	LS			1 1	60,000.0	160,000	
ASBESTOS REMOV.	AL	LS			1 1	00,000.0	100,000	

DD Form 1391 C

1 Dec 76

1.Component FY NAVY	2004 MIL	ITARY CO	NSTR	UCTION	PROGR	AM	2.Date 22 AUG	2002
3. Installation and NAVSUPPACT LAMADDA LAMADDALENA SARDIN	LENA IT	IC: N32960		4. Proje CONSOLIDA) FACILITI	ES
5.Program Element 0204896N	6.Categor 15964	ry Code	7.	Project N P995	Number	8. Pro	ject Cost 39,020	
<u> Item</u>		<u>UM</u>		Quantity	•	<u>Unit Cos</u>	<u>t</u>	<u>Total</u>
Roofing		LS		_	1	10,000.0	0	10,000
NAVFAC ADJUSTMENT		LS		-	1	90,000.0	0	90,000
MAT/EQUIP/LABOR TRAI	NSPORATION	LS			1 9	80,000.0	0 9	80,000
Add'l transport. cos LaMadd to St. Stefa	st from	LS		<u>:</u>		96,000.0		396,000
NAVFAC ADJUSTMENT		LS		1	1	84,000.0	0	84,000
(A) Date Design Star (B) Date Design 35% (C) Date Design Comp (D) Percent Complete (E) Percent Complete (F) Type of Design C (G) Parametric Estim (H) Energy study/Life	Complete bleted as of Jan School Scho	EPTEMBER 20	st			Design	112001 012003 092003 2% 35% Bid Build Yes Yes	
2. Basis: (A) Standard or Def (B) Where Design Wa 3. Total Cost (C) = (A) Production of I (B) All other Design (C) Total (D) Contract (E) In-House 4. Contract Award 5. Construction Stand 6. Construction Computation Computati	as Most Recent (A) + (B) = Plans and Spenger Costs	ntly Used: (D) + (E) ecification	ıs	be provid	ed from	other ap	N N/A \$2,647 \$1,985 \$662 \$2,647 \$1,655 \$992 122003 012004 072006	ons:
	-				Shakedow			
Major Equipment Electronic Security S	Source	g Funding Year 2005	Start Mo/		Start-Er	nd <u>da</u> Mo/	'Yr	Cost (000) ,341,000

1.Component NAVY	FY 20	04 MILITARY COI	ISTF	RUCTION PROGRA	AM	2.Date 22 AUG 200	02
3. Installation NAVSUPPACT LAN LAMADDALENA SA	MADDALEI			4. Project Title CONSOLIDATE SANTO		O FACILITIES	
5.Program Eleme		Category Code 15964	7.	Project Number P995	8. Pro	oject Cost (39,020	\$000)

Attachments:

Economic Analysis
Facility Planning Document(s)/P-80 Calculations
Site Plan

JOINT USE CERTIFICATION:

The Regional Commander certifies that this project has been considered for joint use potential. Unilateral Construction is recommended. This Facility can be used by other components on an as available basis; however, the scope of the project is based on Navy requirements.

Activity POC: Phone No:

FACD WORKSHOP MEETING PARTICIPANTS

PROJECT: P-995 Waterfront Recapitaling FACD Working Sessions	ization – Santo Stefano	Date: 10 - 20 October 2003
NAME & E-MAIL (PLEASE PRINT)	ORGANIZATION/TITLE	PHONE/FAX
CAPT E. J. Gardiner	NSA La Maddalena	ph: 0789-798-166
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LCDR D. Jessica Pferrerkorn	NSA La Maddalena	ph: 0789-798-166
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LT Tom Moskal	NSA LA Maddalena	ph: 335-727-6009
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FACD WORKSHOP



MEETING PARTICIPANTS

PROJECT: P-995 Waterfront Recapitalization – Santo Stefano
FACD Working Sessions

Date:
10 - 20 February 2003

FACD Working Sessions		10 - 20 February 2003
NAME & E-MAIL (PLEASE PRINT)	ORGANIZATION/TITLE	PHONE/FAX
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Bill Craig	Lewis & Zimmerman Associates, Inc	ph: 936-632-8368
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LT Andy Kremer	NSA La Maddalena	ph: 335-570-5241
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Don Green	MWR - NPC	ph: 901-874-6661
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Carl Jenne	Allan & Conrad, Inc.	ph: 407-628-5282
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FACD WORKSHOP MEETING PARTICIPANTS

Date: PROJECT: P-995 Waterfront Recapitalization - Santo Stefano 10 – 20 February 2003

FACD Working Sessions		10 – 20 February 2003
NAME & E-MAIL (PLEASE PRINT)	ORGANIZATION/TITLE	PHONE/FAX
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Michael Hackman	ISD Director	ph: 0789-798-384
em: hackmanm@lamadd.navy.mil	NSA La Maddalena	fx: 0789-798-407

FACD WORKSHOP MEETING PARTICIPANTS



	MEETING F	ARTICII	PANTS ——
PROJECT: P-995 Waterfront Recapita FACD Working Sessions	lization – Santo Stefano0	Date:	10 – 20 February 2003
NAME & E-MAIL (PLEASE PRINT)	ORGANIZATION/TITLE		PHONE/FAX
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em: makib@lamadd.navy.mil	Command Safety Office	fx	ζ:
Daniel Jordan	NSA Environmental	р	h: 623-8004
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ENS Jennifer Cheswick	NSA	р	h: 789-798-513
em: cheswickj@lamadd.navy.mil	PWD Site Officer	fx	x: 335-781-3430
Christopher Epps	Safety/Fire Protection	р	h: 623-8309
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Al Myers	NCIS	р	h: 623-8229
em: amyers@ncis.navy.mil		fx	K: 623-8374
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em: kenoyerj@lamadd.navy.mil		f)	
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CPO Keith Sheller	Port Services	р	h: 0789-798-484
em: shellerk@lamadd.navy.mil		fx	(:
Gregory Seip	MWR Recreation	р	h: DSN 623-8241-058
em: seipg@lamadd.navy.mil		f>	<:
John Zotto	NCIS	р	h: 623-8229
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Attila Graziani	PW La Maddalena	р	h: 623-8314
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em: grillos@efamed.navfac.navy.mil	Utilities Engineer	fx	k: 626-4346

FACD WORKSHOP

MEETING PARTICIPANTS

Date:



PROJECT: P-995 Waterfront Recapitalization – Santo Stefano0

FACD Working Sessions	zation – Santo Stefanov	10 – 20 February 2003
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em: diegav@lamadd.navy.mil	T-Shed Supply	fx: 0789-798250
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em:		fx: +39 070 60425320
LTC Ruggero Meneghello	DIRETTORE MARIGENIMIL	ph: +39 0789 792348
em:		fx:

FACD WORKSHOP MEETING PARTICIPANTS

PROJECT: P-995 Waterfront Recapit FACD Working Sessions	alization – Santo Stefano0	Date: 10 – 20 February 2003
NAME & E-MAIL (PLEASE PRINT)	ORGANIZATION/TITLE	PHONE/FAX
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EA3 Martin O'Brien	PW	ph: 0789-798-515
em: obrienm@lamadd.navy.mil	Santo Stefano	fx:
CM1 Robert D. Campbell	PWD	ph: 0789-798-045
em: campbellr@lamadd.navy.mil	Site	fx:
Laura Massey	MWR	ph:
em: ismassey@email.unc.edu	Intern	fx:
		ph:
em:		fx:
		ph:
em:		fx:
		ph:
em:		fx:
		ph:
em:		fx:
		ph:
em:		fx:
		ph:
em:		fx:

P-995 WATERFRONT RECAPITALIZATION FACD



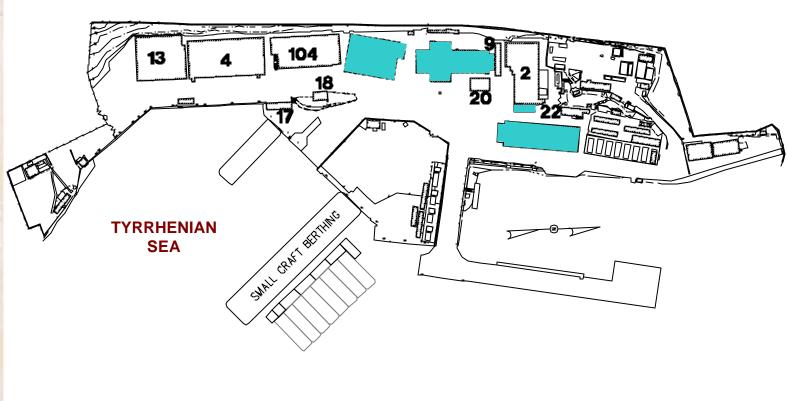
Architecture Engineering Interior Design



FINAL PRESENTATION 20 February 2003

PROPOSED PHASE 1A





LEGEND:

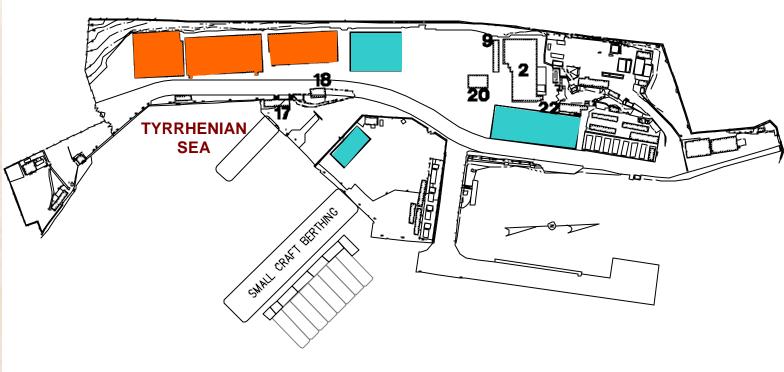
Demolish Bldgs 3, 12, 14, and portion of bldg 2





PROPOSED PHASE 1B





LEGEND:

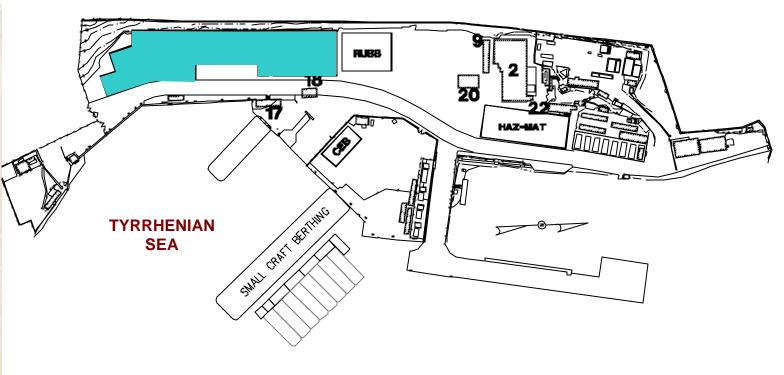
- Construct RUBB, Hazmat,
 Warehouse Office and CEB
- Demolish Bldgs 13, 4, and 104





PROPOSED PHASE 2A





LEGEND:



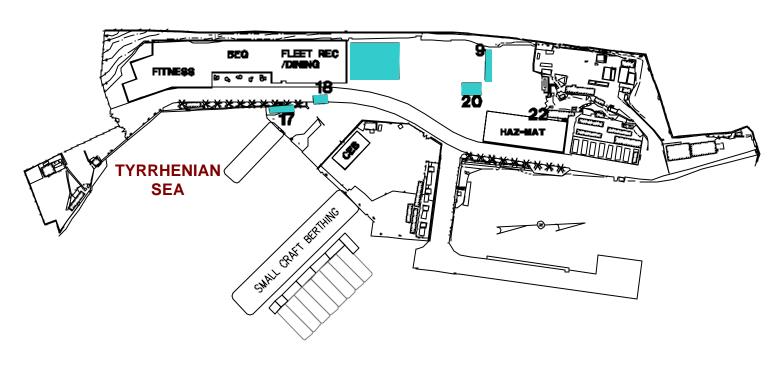
Construct Dining, BEQ, Fitness, Fleet/Rec





PROPOSED PHASE 2B





LEGEND:

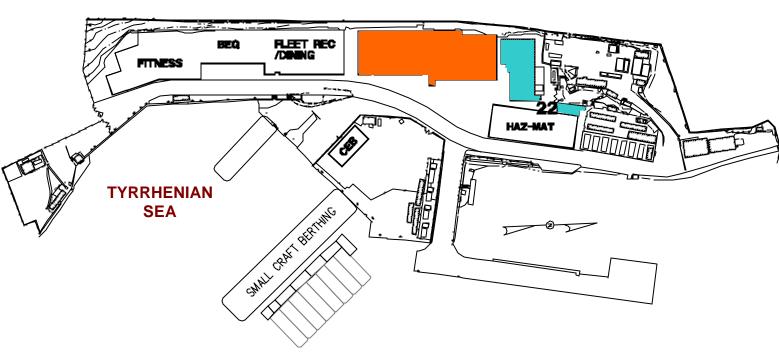
Demolish RUBB, and Bldgs 9, 17, 18, and 20



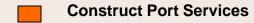


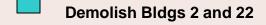
PROPOSED PHASE 3A





LEGEND:



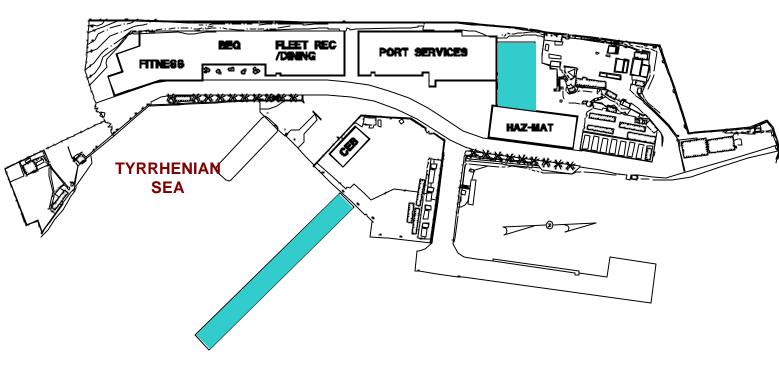






PROPOSED PHASE 3B









LEGEND:

Construct General Warehouse
And Small Craft Berthing

CONSTRUCTION SCHEDULE

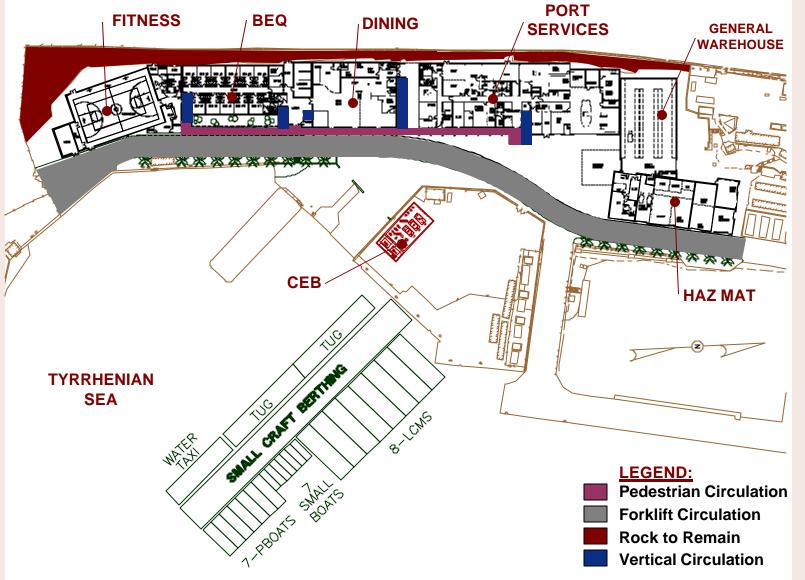


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ROPOS	ED CONSTRUCTION SCHEDULE									İ							İ																				
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1B	Demo 104,4, 13,		3																						#		#										
1B	Construct Hazmat, W'Hse Off.		11			÷											L								#		#										
1B	Construct CEB			3																							#	+									
2A	Construct Dining				19																	#		#	#		#										
2A	Construct Gym, BEQ, Fleet Rec				25																					#	#										
2B	Demolish RUBB, 9, 17, 18, 20												3												#		#										
3A	Construct Port Services												25																								
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ARCHITECTURAL SITE PLAN







BUILDING "W" COMPOSITE GROUND FLOOR PLAN



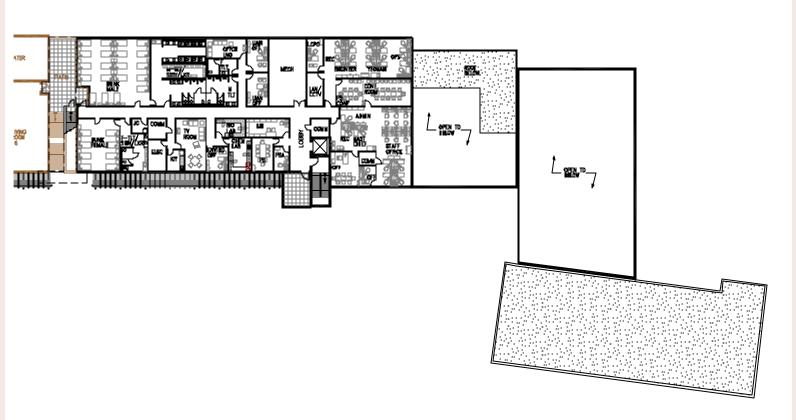






BUILDING "W" COMPOSITE FIRST FLOOR PLAN









BUILDING "W" GROUND FLOOR PLAN - PORT SERVICES



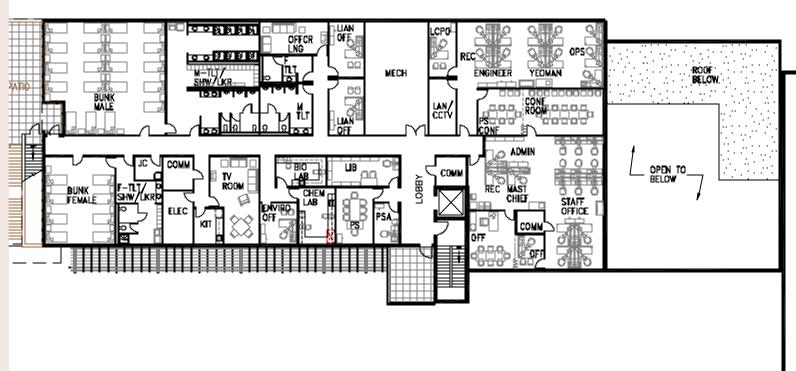






BUILDING "W" FIRST FLOOR PLAN - PORT SERVICES







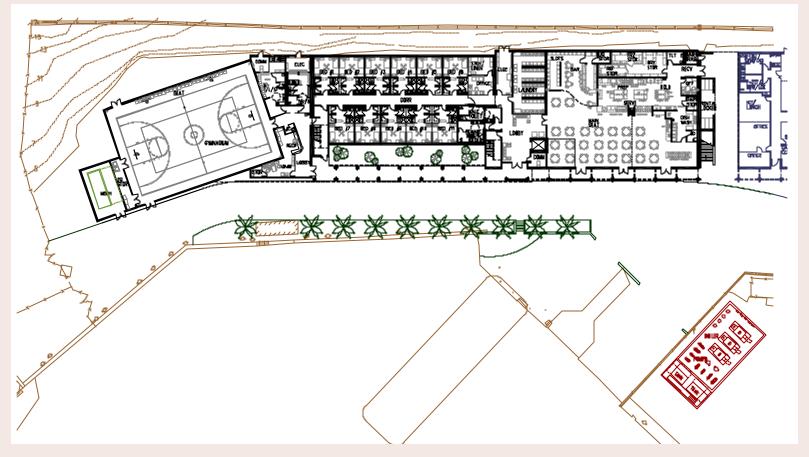


BUILDING "W" GROUND FLOOR PLAN - WAREHOUSE



BUILDING "M" COMPOSITE GROUND FLOOR PLAN









BUILDING "M" COMPOSITE FIRST FLOOR PLAN



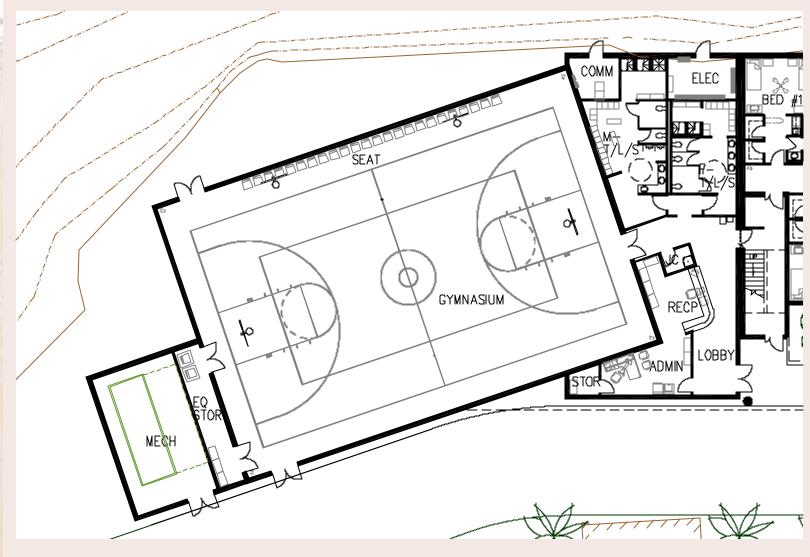






BUILDING "M" GROUND FLOOR PLAN – FITNESS CENTER



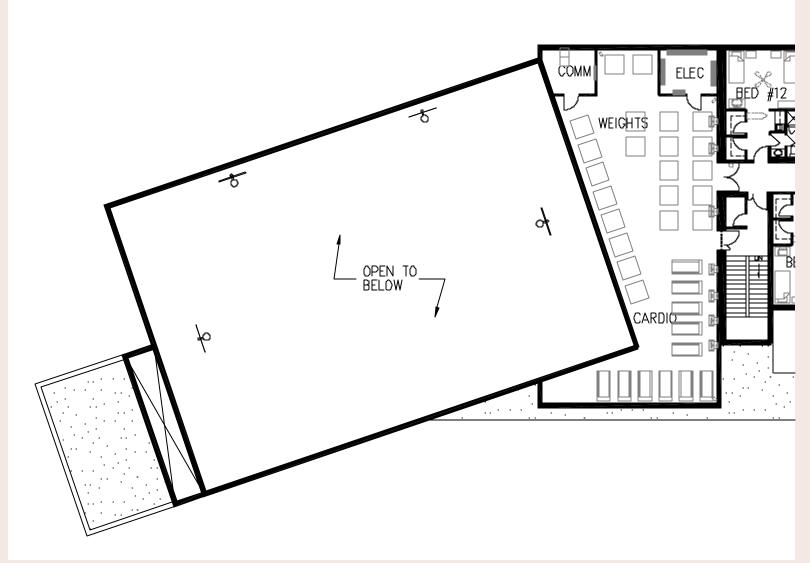






BUILDING "M" FIRST FLOOR PLAN – FITNESS CENTER



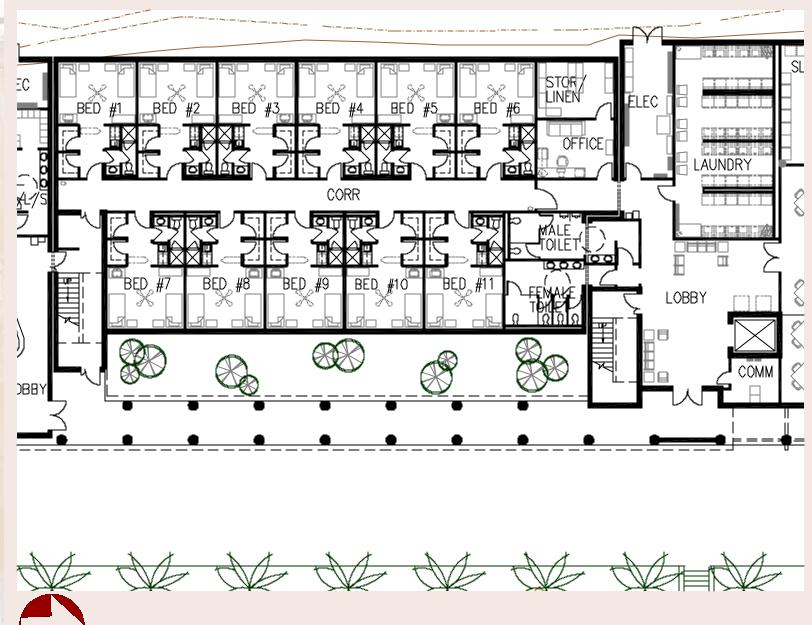






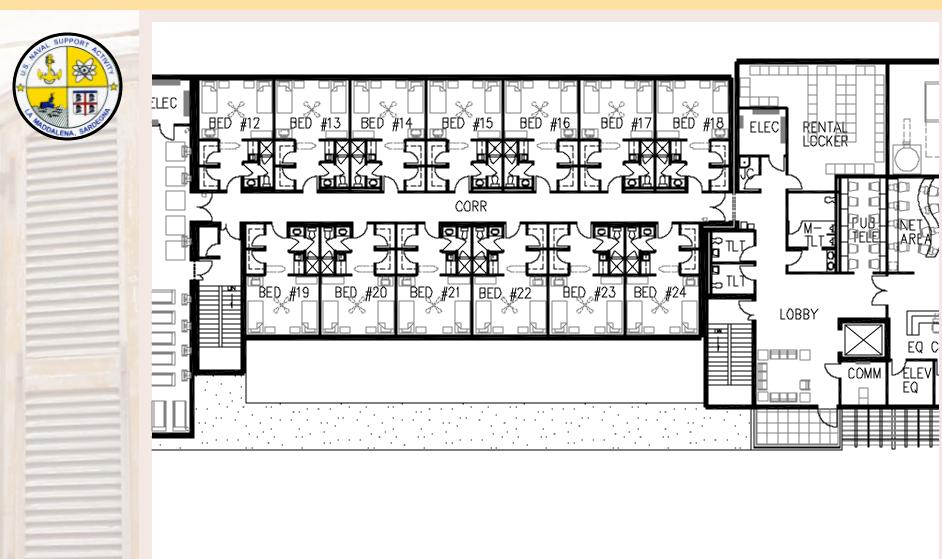
BUILDING "M" GROUND FLOOR PLAN - BEQ





Architecture Engineering Interior Design

BUILDING "M" FIRST FLOOR PLAN - BEQ

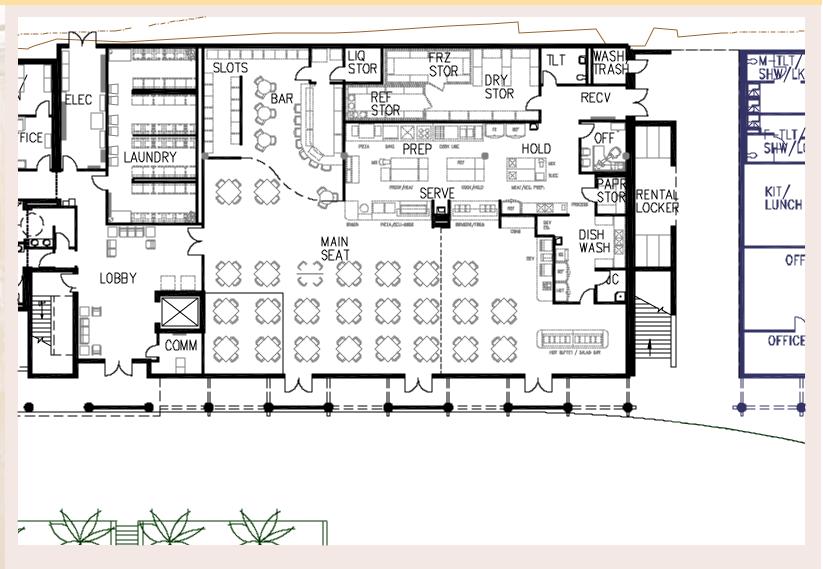






BUILDING "M" GROUND FLOOR PLAN – DINING FACILITY



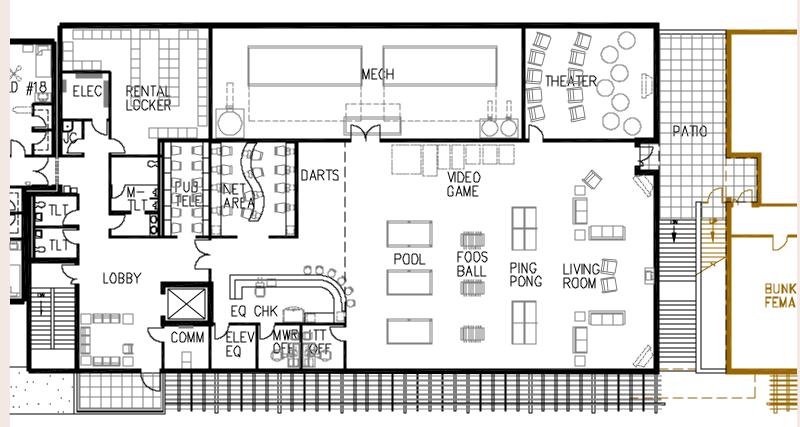






BUILDING "M" FIRST FLOOR PLAN – FLEET REC



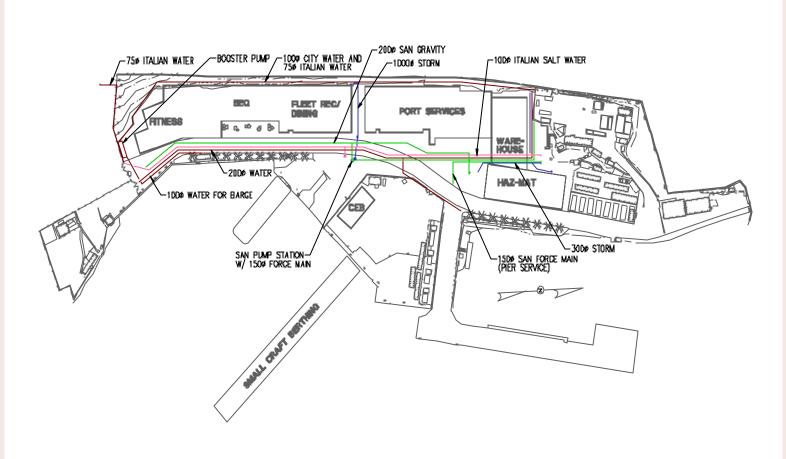






CIVIL SITE PLAN









STRUCTURAL OVERVIEW

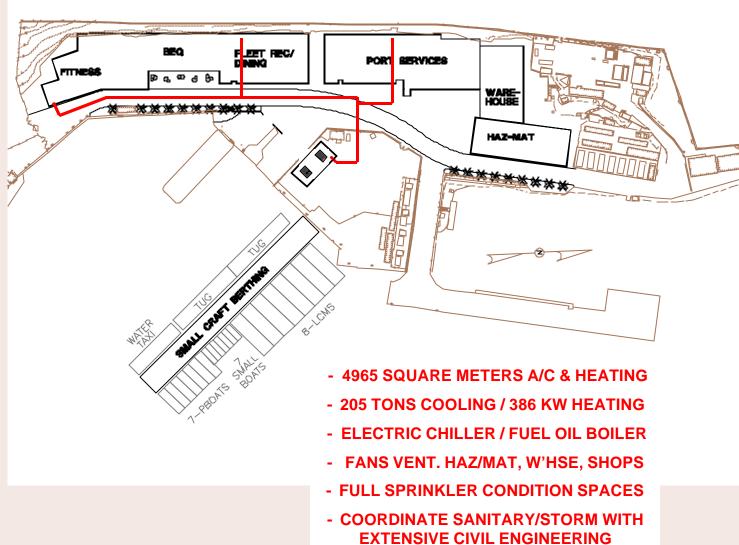


- Conventional Spread Footings Anticipated
- Cast-in-Place Concrete Walls at Exterior
- Mix of Cast-in-Place Columns and Walls at Interior
- Precast Concrete Floor System
- Conventional Steel Roof Systems, with Engineered Trusses over Long Spans
- Exceed Minimum AT/FP Standards



MECHANICAL SITE PLAN

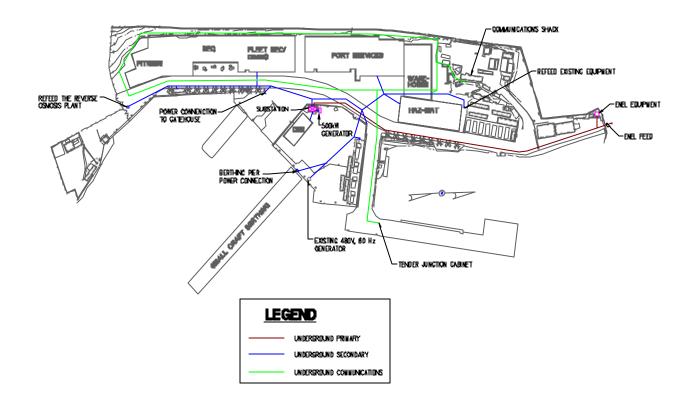






ELECTRICAL SITE PLAN









FACILITY AREAS



Architecture Engineering Interior Design • Program: FY 2004

• Space Program Elements:

	<u>AUTHORIZED</u>	DESIGN
Port Services:	3,215 GSM	2,847 GSM
Fitness /Fleet Rec:	1,666 GSM	1,823 GSM
Bachelor Quarters:	1,152 GSM	1,129 GSM
Dining Facility:	759 GSM	872 GSM
General Warehouse:	857 GSM	767 GSM
Hazardous Materials:	442 GSM	397 GSM
Central Energy Building:		130 GSM
Total Area:	8,091 GSM	7,965 GSM
Small Craft Berthing:	200 LM	200 LM
Canopies		160 GSM

COST ESTIMATE

SUPPORT ACTION	
ODALINA, SAR	
Architecture Engineering Interior Design	

Authorized Amount:	\$39.02 Million
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Authorized Amount.			
• E.C.C.			\$32.70 Million
• As Designed:		\$ 1.60 Million	
 Demolition of exi 	sting buildings	\$ 87 thousand	
• Erection/Remova	al of RUBB building	\$ 9.60 Million	
New Buildings:	Architectural/Civil/Structural	\$ 4.49 Million	
	Electrical Systems	\$ 6.23 Million	
	Mechanical Systems	\$.90 Million	
• A.T./F.P.		\$ 1.01 Million	
Site Preparation		\$ 1.87 Million	
Small Craft Berth	ing (100M)	\$ 1.27 Million	
Exterior Mechani	cal Systems	\$ 1.64 Million	
Exterior Electrica	al Systems	·	
 Diesel Generator 	s (2) and baffling walls	\$ 1.27 Million	
• W.W.T.P. Upgrad	les	\$ 1.16 Million	
• Enel fixed costs		\$ 52 Thousand	
• Extended overhe	ad/associated phasing cost	\$ 1.26 Million	
• TOTAL			\$ 32.49 Million
• Difference:			\$.21 Million
• Identify Bid Options @	5% : \$ 1.7 Million)		\$ 1.70 Million
•Small Craft Berth	ing		\$ 1.87 Million
Diesel Generators	3		\$ 1.27 Million

















PROJECT ANIMATION

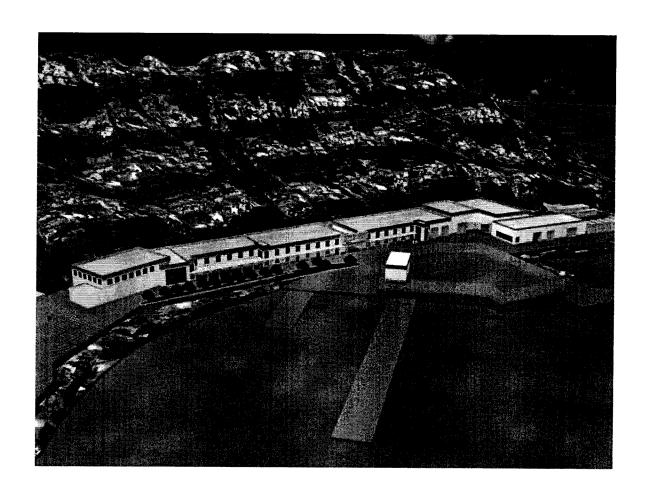




THANK YOU FROM THE FACD TEAM







FACD BASIS OF DESIGN 20 FEBRUARY 2003

P-995 SANTO STEFANO CONSOLIDATION NSA LA MADDALENA, ITALY

DEPARTMENT OF THE NAVY ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND



TABLE OF CONTENTS

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- 5. INTERIOR DESIGN
- 6. ANTI -TERRORISM / FORCE PROTECTION
- 7. FOOD SERVICE
- 8. STRUCTURAL
- 9. MECHANICAL
- 10. FIRE PROTECTION
- 11. PLUMBING
- 12. ELECTRICAL
- 13. COMMUNICATION
- 14. COLD IRON SUPPORT ELECTRICAL SUPPLY ALTERNATIVE

BOD APPENDIX

Gross Area Calculations

SOILS INVESTIGATION REPORT SUMMARY ASBESTOS AND LEAD BASED PAINT SURVEY SUMMARY LEED 2.1 CHECKLIST BENEFITS OF ROCK REMOVAL



BASIS OF DESIGN

1. CIVIL

1.1 General

A. The site work for base operations support facilities at Santo Stefano will include removing rock, demolishing pavement and utilities, and providing new sanitary sewer, water service, and storm drainage, and replacing concrete pavement.

1.2 Existing Conditions

A. The site of the proposed facilities encompasses the area bounded by the sewage treatment plant and boiler facility on the north, the Santo Stefano Bay on the east, the Italian NATO facility on the south and a perimeter fence on the west. The site utilities include water, sanitary sewer, storm drainage, as well as telephone and electrical. The water distribution system includes 100 mm city supply main, pressurized booster system, pump facility for water barge, 60,000 gallons per day reverse osmosis system, four 500 cubic meter offsite concrete storage tanks, 137,000 gallons per day granular activated Carbon system, and a 150 mm distribution main for the base. The existing sanitary system includes seven lift stations located at various locations that may pump waste to the sewage treatment plant on the north end of the base. The existing storm system consists of 800 mm piping, which collets water from offsite area west of the base and discharges to the Santo Stefano Bay. The majority of storm water is removed by surface runoff. The site pavement consists of 200 mm of concrete over 150 mm of bituminous concrete. The west boundary of the site consists of elevated rock which extends into the site. Extensive rock removal will be required on the southwest corner of the site. A topographic survey was performed in October 2002.

1.3 Demolition

A. All existing pavement within the site will be removed. The existing water distribution main, the seven sanitary sewage lift stations with force mains and supporting structures will be removed. The storm drainage system serving the offsite area to the west will be removed and relocated.

1.4 New Site Work

A. In order to accommodate the proposed facilities, the rock on the west side of the site will have to be removed vertically along the face of the perimeter fence. All of the existing pavement will be removed, the site will be regraded and a 150 mm temporary

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concrete pavement surface will be installed to allow vehicle passage during the remainder of the construction period. After all new construction is completed the temporary surface will be removed and a final 200 mm concrete pavement will be provided. The laydown area and all contractor support facilities need to be located on barges.

1.5 Grading

A. The existing site drains primarily by overload flow to the water's edge. The area between the proposed facilities and the perimeter fence along the west side of the site shall be graded for stormwater runoff using a trench system. The remaining portion of the site will be graded such that surface runoff will discharge into the bay.

1.6 Water Supply

A. The facility is served by an existing 100 mm water line that enters at the northwest corner of the site. The existing line is located on the west side of the existing buildings and extends along the west perimeter fence. The existing line will be removed and replaced with a new 100 mm pipe. A new 200 mm pipe will be provided east of the new buildings to provide domestic and fire service. Upgrades to the existing water main from the storage tank may be required.

1.7 Sanitary Sewer

A. The existing site has seven sanitary sewer lift stations located at various locations that pump water to the sewage treatment plant. A single pumping station serving a 200 mm gravity system will be provided on the east side of the proposed buildings to direct water to the sewage treatment plant. The treatment plant shall be upgraded to include tertiary filters with backwash capabilities, expanding the waste sludge digester, replacing the effluent flow meter, providing a dechlorination system following the chlorine contact tanks, providing a mechanical bar screen at the grease separator, and providing a ventilization scrubber for hydrogen sulfide at the equalization tank.

1.8 Storm Drainage

A. The existing site drains primarily by overload flow to the waters edge. A new 1000 mm wide concrete trend with a grate top will be provided along the west edge of the site to collect runoff from the elevated hillside and the west side of the proposed buildings. The trench will connect to an existing 800 mm concrete pipe that discharges to the Bay.

2. LANDSCAPING

2.1 General

A. The landscape design will emphasize, enhance, and screen the housing and recreational areas of the facility. Landscaping will help to reduce the effects of wind at major entrances. Planting will be used to screen utilitarian site features and to acoustically dampen internal and external noise. Due to the limited size of the site, only small areas for landscaping are available.

2.2 Landscape Specifications:

- A. Landscape design shall include planting and irrigation of all planted areas.
- B. The plant material pallet will include species commonly found in the region. All species will be selected to minimize maintenance requirements and tolerate drought conditions. Trees shall provide shade, relief from warm temperatures and furnish force protection barriers.
- C. All landscaped areas shall be irrigated with an automatic irrigation system. All irrigation piping, heads and valves, where appropriate will be PVC pipe. Pop-up heads will be provided where possible. All wiring will be low voltage. Due to the limitation of available pressure for irrigation, the irrigation design shall include smaller zones controlled by numerous controllers with more valves to help compensate for the lack of available pressure.
- D. The hardscape design shall provide a combination of various pavement surfaces and layout that compliment the building finishes and provide a variety of spatial experiences for the user.

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3. ARCHITECTURE

3.1 Requirement

A. Adequate waterfront support facilities are required for NSA La Maddalena's mission to provide all necessary support to the home-ported USS Emory S. Land, which is berthed on the small island of Santo Stefano. Facilities on Santo Stefano are limited to those that directly support the ship's operation and its crew. Remaining support and housing functions are located in leased facilities on the island of La Maddalena, approximately two miles from the ship's berth. Transient berthing areas are required for sailor's who 'hot rack' while submarines are underway. Submariners must stay at Santo Stefano because travel times to the island inhibit operational readiness requirements.

3.2 Features of Architectural Design

- Α. The project will construct separate and usable facilities to include a new Port Services Building, Fitness Center, Fleet Recreation Center, Hazardous Materials / Waste Storage Warehouse. Transient Bachelor Quarters, Dining Facility and General Warehouse. The project will also construct a small craft berthing pier. Two new diesel generators will be added to the existing Cold Iron support capability and a new sound baffling walls will be provided around all of the generators. The project will provide environmental upgrades to the existing waste water treatment plant. The project will improve performance of the current mission without increase in personnel. The current mission will not be expanded. The facilities will be heated and cooled, and provided with fire protection, including sprinklers, alarm and detection system, connection to NSA La Maddalena utility system. Handicap criteria will be incorporated into the design. Construction of these facilities will be on spread foundations with cast in place concrete walls, concrete and structural steel roof structures and a modified bitumen roof system.
- B. The new Port Services Building will provide ashore facilities for functions presently provided afloat on an existing Berthing Barge. After the new shore facilities are constructed, the Barge will be removed.
- C. One of the prime project goals is to respect the LaMaddalena Archipelago National Park (Parco Nazionale Archipelago LaMaddalena) by creating architecture that blends into the natural environment. The building heights are limited to 11 meters. A large rock outcropping was preserved at the southwest corner of the facility and the native planting will also be provided.

- D. The design provides two separate buildings connected by a central breezeway and common stair element. The Fitness Center, BEQ, and Recreation/Dining facility was placed away from the more noisy industrial areas. Port Services Administration, shop areas and warehouse spaces are placed closer to the ship. To reduce the impact of the long, low massing, different user functions have been offset to break up the façade.
- E. The façade will be provided with long, colored bands that will be painted with natural colors to blend into the landscape behind the installation. A long, covered walkway for personnel has been provided for continuity between the two buildings. The walkway also provides for safe pedestrian travel away from vehicle traffic which runs along the water's edge. Crosswalks of different paving materials are located at several key places.

3.3 General

A. Applicable Criteria:

- 1. Scope and Budget Criteria:
 - a. DD 1391 dated 5/8/02, FY04 MCON P-995, Consolidate Santo Stefano Facilities.

2. Design Criteria:

- a. MIL-HBK-1190, Facility Planning and Design Guide
- b. MIL-HBK-1008C, Fire Protection For Facilities Engineering, Design and Construction, Jun 97
- c. MIL-HDBK-1032/2 Covered Storage, 30 September 1998
- d. MILHBK-1013/10, fencing, Gates, Barriers & Guard Facilities, May 93
- e. OPNAVINST 5530.14C, Physical Security Manual, Dec 98
- f. USEUCOM, Operation Order 01-01 (OPORD 01-01) Anti-Terrorism / Force Protection Design Standards
- g. UFC DoD Minimum Antiterrorism Standards for Buildings, 31 Jul 02
- h. International Building Code, 2000 Edition
- i. NFPA 101, Life Safety Code, 1997 Edition
- j. Uniform Federal Accessibility Standards, Jan 1992
- k. Green Building Rating System Version 2.1, Nov 2002
- I. UFC 1-200-01, Design: General Building Requirements, 31 July 2002
- m. NAVFAC Elevator Design Guide, 10 Jan 01

- n. Italian Fire Protection Manual (L. Corbo)
- B. Criteria Application:
 - 1. All facilities will be fully sprinklered in accordance with U.S. codes and Italian Law.
 - 2. Occupancy of each facility is established in accordance with the Life Safety Code.
 - No asbestos containing materials will be used in the new construction. Demolition and disposal of existing structures containing hazardous materials (asbestos, lead paint, mercury, PCBs) will be in accordance with U.S. and Italian Law.
 - 4. All facilities are designed to meet the requirements of EUCOM Force Protection, Physical, Standard Security Criteria
 - 5. All facilities are designed to be handicapped accessible in accordance with UFAS and Italian Law. Facilities with two stories will be provided with elevators.
- C. Construction: The structural system of these facilities will be reinforced concrete bearing walls and concrete frame construction with concrete foundations and structural floors. Low sloped modified bitumen roof system will be supported with a structural steel frame. Perimeter wall and roof insulation will be the rigid type. These facilities will be heated and cooled, and provided with information systems and fire protection including sprinklers, alarm and detection system connected to the base-wide utility system.
- D. Demolition of Existing Facilities: Demolition is provided for twelve existing facilities including:

1.	Building 2:	436 SM
2.	Building 3:	1176 SM
3.	Building 4:	880 SM
4.	Building 9:	60 SM
5.	Building 12:	388 SM
6.	Building 13:	417 SM
7.	Building 14:	579 SM
8.	Building 17:	46 SM
9.	Building 18:	31 SM
10.	Building 20:	65 SM
11.	Building 22:	95 SM
12.	Building 104:	866 SM

E. Demolition and disposal of existing structures containing hazardous materials (asbestos, lead paint, mercury, PCBs) will be in accordance with U.S. and Italian Law.

- F. The project will require phasing of demolition and construction activities in order to maintain operation of the base. Phasing will be as follows:
 - 1. Phase 1A: Demolish Buildings 3, 14 and portion of 2. Construct RUBB Building.
 - 2. Phase 1B: Demolish Buildings 104, 4, and 13. Construct HAZMAT and Offices for General Warehouse. Construct Central Energy Building.
 - 3. Phase 2A: Construct Dining Area. Construct Fitness Center, BEQ, and Fleet Recreation Area.
 - 4. Phase 2B: Demolish RUBB Building and Buildings 9, 17, 18, and 20.
 - 5. Phase 3A:Construct Port Services. Demolish Building 2.
 - 6. Phase 3B: Construct General Warehouse. Construct Small Craft Berthing Pier.
- G. The time of construction for the project is anticipated to be 42 months.
- 3.4 Building Areas
 - A. See attached Program for Design (PFD) for Area Analysis.
- 3.5 Life Safety
 - A. Facilities will comply with NFPA 101, MIL-HDBK-1008C and Italian Law for Occupant load calculations.
 - 1. Unit egress widths.
 - 2. Stair widths.
 - 3. Number, arrangement, identification and illumination of exits.
 - 4. Natural light to work stations.
 - 5. Dead end corridor lengths.
 - 6. Exit lighting.
 - 7. Exit stair hardware.
 - B. Building M: Fitness Center, Transient Bachelor Quarters, Dining Facility, Fleet Recreation Center.
 - 1. Occupancy:
 - a. Fitness Center (Gymnasium): Assembly A-3, IBC Sec 303.1 / NFPA 101, Ch. 12.
 - b. Transient BQ: Residential R-1, IBC Sec 310.1 / NFPA 101, Ch. 28.
 - c. Dining Facility: Assembly A-2, IBC Sec 303.1 / NFPA 101, Ch. 12.

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- d. Fleet Recreation Center: Assembly A-2, IBC Sec 303.1 / NFPA 101, Ch. 12.
- 2. Required Separation of Occupancies (IBC Table 302.3.3):
 - a. Assembly A-3 / Residential R-1: 2 HR
- 3. Construction Type:
 - a. Type II B, fully sprinklered, IBC Table 503 and Sec 602 (if allowances are made or sprinklers).
- 4. Resistive Requirements (IBC Table 601):

a.	Structural Frame:	0 Hr.
b.	Bearing Walls – Exterior:	0 Hr.
C.	Bearing Walls – Interior:	0 Hr.
d.	Non Bearing Walls – Exterior:	0 Hr.
e.	Non Bearing Walls – Interior:	0 Hr.
f.	Floor Construction:	0 Hr.
g.	Roof Construction:	0 Hr.

- 5. Allowable Areas: (IBC Table 503):
 - a. Allowable Area: 882.6 SM (9500 SF)
 - b. 200% Increase for Sprinklers (IBC Sec 506.3): 2647.7 SM (28,500 SF)
- 6. Approximate Area of Building M:
 - a. Ground Floor: 1,957 SM (21,065 SF)
 b. First Floor: 1,957 SM (21,065 SF)
 c. Total: 3,914 SM (42,130 SF)
- 7. Allowable Building Height (IBC Table 503):
 - a. Allowable Building Height 2 Storiesb. Actual Height: 2 Stories
- 8. Arrangement of Means of Egress:
 - a. Dead-end corridors shall not exceed 6.1 m (20 feet).
 - b. Travel distance shall not exceed 60 m (200 feet), NFPA A-7.6.1, exception for sprinklers).
- 9. Protection:
 - a. Boiler Rooms: 0 Hr. (IBC Table 302.1.1 sprinklers)



b.	Air Handler Rooms:	0 Hr.
C.	Laundry Rooms over 9.29 SM (100 SF):	1 Hr.
d.	Storage Rooms over 9.29 SM (100 SF):	1 Hr.

- 10. Corridors (NFPA 101, Sec 12.3.6 and 28.3.6.1):
 - a. Construction of corridor walls in sprinklered buildings (Assembly Occupancy) is un-rated.
 - b. Construction of corridor walls in sprinklered buildings (Residential Occupancy) is rated ½ Hr.
- C. Building W: Port Services, General Warehouse, Hazardous Materials Storage.
 - 1. Occupancy:
 - a. Port Services Administration: Business B, IBC Sec 304.1 / NFPA 101, Ch. 38.
 - b. Port Services Operations: Factory F-1, IBC Sec 306.2 / NFPA 101, Ch. 40.
 - c. Port Services Bunk Rooms: Residential R-1, IBC Sec 310.1 / NFPA 101, Ch. 28.
 - d. General Warehouse: Moderate Hazard Storage Group S-1, IBC Sec 311.2 / NFPA 101, Ch. 42.
 - e. Hazardous Materials Warehouse: High Hazard Group H-2, IBC Sec 307.1 / NFPA 101, Ch. 42.
 - 2. Required Separation of Occupancies (IBC Table 302.3.3):
 - a. High Hazard H-2 / Moderate Hazard Storage S-1:2 Hr.
 - b. Moderate Hazard Storage S-1 / Factory F-1: 3 Hr.
 - c. Factory F-1 / Business B: 3 Hr.
 - d. Business B / Residential R-1 2 Hr.
 - 3. Construction Type:
 - a. High Hazard H-2: Type II B, fully sprinklered, IBC
 Table 503. Area modifications not permitted.
 - b. All other occupancies: Type II B, fully sprinklered, IBC Table 503 and Sec 602 (if allowances are made or sprinklers).
 - 4. Resistive Requirements (IBC Table 601):
 - a. Structural Frame: 0 Hr.
 b. Bearing Walls Exterior: 0 Hr.
 c. Bearing Walls Interior: 0 Hr.
 d. Non Bearing Walls Exterior: 0 Hr.



e. Non Bearing Walls – Interior: 0 Hr.
f. Floor Construction: 0 Hr.
g. Roof Construction: 0 Hr.

g. Roof Construction: 0 Hr.

- 5. Allowable Areas: (High Hazard H-2: IBC Table 503):
 - a. Allowable Area: 650.3 SM (7,000 SF)b. Approx. Area of H-2: 442.0 SM (4,758 SF)
- 6. Allowable Areas: (All other occupancies: IBC Table 503):
 - a. Allowable Area: 1,400 SM (15,500 SF)
 b. 200% Increase for Sprinklers (IBC Sec 506.3): 4,181 SM (45,000 SF)
- 7. Approximate Area of Building W:
 - a. Ground Floor:

b. High Hazard H-2: 442 SM (4,758 SF)
 c. Other Occupancies: 2,308 SM (24,843 SF)
 d. First Floor: 1,170 SM (12,594 SF)
 e. Total: 3,920 SM (42,195 SF)

8. Allowable Building Height (IBC Table 503):

a. Allowable Building Height 2 Storiesb. Actual Height: 2 Stories

- 9. Arrangement of Means of Egress:
 - a. Dead-end corridors shall not exceed 6.1 m (20 feet).
 - b. Travel distance for Business Occupancy shall not exceed 91 m (300 feet), NFPA A-7.6.1, exception for sprinklers).
 - c. Travel distance for Industrial Occupancy shall not exceed 75 m (250 feet), NFPA A-7.6.1, exception for sprinklers).
 - d. Travel distance for Storage Occupancy shall not exceed 75 m (250 feet), NFPA A-7.6.1, exception for sprinklers).
 - e. Travel distance for High Hazard Occupancy shall not exceed 23 m (75 feet), NFPA A-7.6.1, exception for sprinklers).
- 10. Protection:
 - a. Boiler Rooms: 0 Hr. (IBC Table 302.1.1 sprinklers)
 - b. Air Handler Rooms: 0 Hr.

C.	Laundry Rooms over 9.29 SM (100 SF):	1 Hr.
d.	Storage Rooms over 9.29 SM (100 SF):	1 Hr.
e.	Battery Storage Systems:	1 Hr.
f.	Paint Shops:	1 Hr.

- D. Corridors (NFPA 101, Sec 12.3.6):
 - 1. Construction of corridor walls in sprinklered buildings is unrated.
 - 2. Corridors are not provided in Industrial, Storage or High Hazard Occupancies.
- E. Interior Finishes:
 - 1. Class A or B (MIL-HDBK 1008C, paragraph 2.7).
- F. Exterior Signage
 - An exterior signage system will be developed. The signage system will provide building identification signs for building entrances and service entrance locations. The signage construction will be modular with easy to remove message panels for ease of updating and maintaining the sign system.

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4. ENERGY CONSERVATION / SUSTAINABLE DESIGN

4.1 General

- A. Sustainable design concepts that improve the environmental and economic performance of the facility will be incorporated into the design. These concepts include optimizing site selection potential, maximizing the use of renewable energy sources, using environmentally preferable products, reducing water and energy consumption, providing facilities with high quality indoor environments, and optimizing operations and maintenance practices.
- B. The design shall obtain a minimum rating of LEED Certified in the Green Building System, version 2.1 developed by the U.S. Green Building Council (USGBC). This rating will be achieved in the six rating areas of sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. Following are items in each area that are target goals for obtaining qualifying points in the rating process. The intent is to meet as many of these goals as possible for the minimum rating of Certified.

1. Sustainable Sites

- a. Erosion and sedimentation control will be provided during construction and during the life of the facility.
- b. The site does not have sensitive site elements and restricted land types.
- c. The site development exceeds 60,000 square feet per acre.
- d. Users either live on the ship or utilize a water taxi to access the site.
- e. No new parking will be provided in this project. Vehicle access to the site is extremely limited.
- f. The new building footprint provides additional open space for the site than the existing buildings and storage containers.
- g. There will be no net increase in the rate and quantity of stormwater run-off from existing to developed conditions.
- h. Shade will be provided over portions of the site's walks and plazas and the plazas will incorporate

light colored/ high-albedo materials.

- i. Roofing will be Energy Star Roof-compliant high reflectance and emissivity.
- j. Lighting levels will not exceed IESNA requirements and direct-beam illumination will not be directed off the building site.

2. Water Efficiency

- a. Planting areas will not be irigated.
- b. The use of potable water in the building will be limited through efficiency in systems and fixtures.

3. Energy and Atmosphere

- The fundamental building elements and systems will be designed, installed and calibrated to operate as intended through best practice commissioning procedures.
- b. The building will meet the energy and performance required by ASHRAE/IESNA 90.1-1999 and NAVFAC energy requirements.
- c. There will be zero use of CFC-based refrigerants in new building HVAC systems.
- d. The energy performance of the building will exceed minimum standards.
- e. Building HVAC, refrigeration, and fire suppression systems will not use HCFC's or Halon.

4. Materials and Resources

- a. The building will be provided with space for the separation, collection and storage of materials for recycling including paper glass, plastics, and metals.
- b. Construction, demolition, and land clearing waste will be recycled to the greatest extent practical.
- c. New construction materials will contain recycled content materials to the greatest extent practical.

- d. New materials and equipment will be locally sourced to the greatest extent practical.
- 5. Indoor Environmental Quality
 - a. The indoor air quality will meet the minimum requirements of voluntary consensus standard ASHRAE 62 -1999.
 - b. Smoking of tobacco is and will be prohibited.
 - c. The HVAC system will be designed with carbon dioxide monitoring sensors.
 - d. An Indoor Air Quality Plan will be adopted to protect HVAC systems during construction.
 - e. The building HVAC system will be flushed out with new filtration media prior to occupancy.
 - f. Low VOC emitting materials will be used in the building including:
 - Adhesives
 - Paints and coatings
 - Carpet
 - Composite wood
 - g. Separate exhaust systems will be provided to isolate contaminants from the rest of the building.
 - h. Operable windows will be provided.
 - i. Thermal comfort and humidity control will comply with ASHRAE Standard 55-1992, Addenda 1995.
 - A permanent temperature and humidity monitoring system will be provided.
 - k. Diffused daylighting will be provided for primary occupied spaces.
 - I. Direct line of site vision glazing will be provided to the greatest extent practical.

5. INTERIOR DESIGN

- 5.1 Port Services (Administrative and Shops):
 - A. Port Services includes both administrative areas and workshops. All of these departments share core functions such as a break room and toilets.
 - B. The finishes selected for this building will be upgraded in the administrative areas while still durable and easily maintained. Circulation areas, open office work areas, and training rooms will receive vinyl composition tile. Private office areas will be carpeted to provide acoustical value, unless the office area is adjacent to an industrial space. The floor materials will then be vinyl composition tile. In all cases the walls will be painted and the ceiling will be primarily acoustical ceiling tile. Shop areas will have sealed concrete floors with painted walls.

5.2 Fitness Facility:

- A. The Fitness Facility includes a gymnasium and weight training and cardiovascular exercise areas. It also includes a small administrative area.
- B. The Gymnasium will receive rubber athletic flooring, painted walls and an exposed ceiling with metal acoustical ceiling panels.
- C. The Weight Training and Cardiovascular areas will receive commercial grade, attached cushion carpeting directly, glued to the sub-floor. The walls will be painted and the ceiling will be a lay-in acoustical tile ceiling.
- D. The Administrative area will receive carpet, painted walls and an acoustical lay-in tile ceiling.

5.3 Bachelor Quarters:

- A. The Bachelor Quarters provides dormitory / apartment style rooms that include private sleeping units with private bathrooms and efficiency style kitchenettes.
- B. The finishes selected for these areas will be upgraded while still durable and easily maintained. Ceramic tile will be used extensively on the floors and bathroom areas, with ceramic tile wainscots used in the primary corridor for added durability. Walls will be either painted or ceramic tile. Ceilings will be acoustical lay-in ceiling tile except in bathrooms, which will be painted plaster.

5.4 Dining Facility / Fleet Recreation:

- A. The Dining Facility and the Fleet Recreation Facility include a full service kitchen with a dining area, a recreation area with pool tables, tennis tables, foosball tables, darts, slot machines, a bar with a stage and dancing area, as well as internet access computers. There are also small administrative support areas. The finishes selected for these areas will be upgraded while still durable and easily maintained.
- B. The Dining area will receive ceramic floor tile, the walls will be painted and ceilings will be acoustical lay-in ceiling tile.
- C. The Kitchen area will receive industrial grade floor tile, the walls will be painted and in some areas will be ceramic tile. Ceilings will be primarily acoustical lay-in ceiling tile that is rated for use in commercial kitchen areas.
- D. The Fleet Recreation areas will receive resilient flooring such as wood-grain sheet vinyl or linoleum. Walls will be primarily painted and ceilings will be primarily acoustical lay-in ceiling tile.

5.5 General Warehouse:

- A. The General Warehouse storage area is secured storage that is divided into smaller storage bays for individual Users. The interior finishes will be industrial in nature. They include a sealed concrete floor with painted concrete walls and exposed ceiling. Bulk storage will support the use of forklifts to load and unload materials.
- B. The administrative areas provide office workspaces for support personnel. The interior finishes have been up-graded in this area and will be less industrial. Vinyl composition tile will be located in office areas, general work areas, circulation areas, break rooms and back of house areas. All walls will be painted and the primary ceiling will be acoustical ceiling tile.
- C. Toilet rooms and showers in the Administration area and will receive porcelain ceramic tile on the floor and on the walls. The ceiling will be painted.

5.6 Hazardous Materials Storage:

A. The Hazardous Materials Storage provides storage for items that are hazardous to the environment if they are mishandled. This area of the facility will have industrial interior finishes in the storage areas. The floor will be sealed concrete with a yellow

stripping pattern that outlines the storage areas and indicates circulation paths. The interior walls will be poured concrete. A yellow and black diagonal stripe wainscot will be painted on the walls from the floor to 1.2 meters above finished floor. The wainscot will indicate areas that contain flammable materials. Other areas will be painted a single color. Exposed structure that has been painted will serve as a ceiling finish.

B. Any office or toilet areas will receive hard durable materials that are easy to maintain. Office materials will consist of vinyl composition tile on the floor with painted walls and acoustical ceiling tiles. Toilets and janitor closets will include porcelain ceramic tile on the floor, epoxy paint on the walls and painted plaster ceilings.

5.7 Interior Signage:

A. An interior signage system will be developed for this project that will provide way-finding information to people as they move through the built environment. Sign types will include Room Identification signs, Informational signs and Restrictive Behavior signs. Additional signage will be developed to identify aisle designations in warehouse areas and hazardous material storage areas.

6. ANTI-TERRORISM / FORCE PROTECTION

6.1 General

- A. Force protection for all bases in the European theater is based on the United States, Commander in Chief, European Operation Order 01-01 (OPORD 01-01) Anti-Terrorism / Force Protection Design Standards, Uniform Facilities Criteria UFC 4-010-10 DoD Minimum Antiterrorism Standards for Buildings dated 31 July 2002 and DoD Minimum Antiterrorism Standards set minimum requirements for both new and existing construction to minimize the likelihood of mass casualties from terrorist attacks.
- B. The site is a DoD facility occupied by DoD personnel. Several buildings qualify as primary gathering facilities, defined as occupancies of over 50 personnel. Warehouse and service areas are not considered primary gathering facilities.
- C. Site-specific applications of force protection standards were discussed with both the security and public works officers. Based on those consultations, and in conformance with the above standards, the following conclusions regarding Force Protection measures were drawn:
 - Minimum standoff distances between buildings will not be provided. Accordingly, sidewalls will be designed for Type III indirect fire rounds.
 - 2. Minimum standoff distances along the east (waterfront) side, with an exception noted below, satisfy the minimum setback requirements and will not require special hardening. The setback requirements are either currently satisfied, or will be satisfied with forthcoming enhancements to operations policies and technology.
 - 3. The south side of the site is accessible only by passing through a secure facility controlled by the sponsor country. By definition, minimum standoff distances may be measured from the entry to that facility. Instead, it was considered prudent to measure the standoff distance from the secondary gate at the entry to this installation. Therefore, some portions at the extreme southeast side of the site will require hardening to resist a Type I explosive.
 - 4. The west side of the site will have a fence adjacent to the buildings. Based on both current and forthcoming enhancements to operations policy and technology, the requirement to provide a controlled perimeter will be

- satisfied. Nevertheless, it was considered prudent to design the west-side walls to resist a Type II explosive event at the fence line.
- 5. None of the buildings are 3 stories high, so design for resistance to progressive collapse is not required.
- 6. Windows and glazing that are within the hardened zones will be selected to withstand the associated design basis threat and not create a fragmentation hazard.
- Screening will be provided to protect from small arms fire. Included in this screening will be a one-meter parapet wall projecting above the roof along the west side of the buildings.
- 8. Reduced opportunities for terrorists to target occupants is inherent in the facility design. Corridors are primarily internal. Outside covered walkways do not face the perimeter fence. Additionally, landscaping will interrupt line of sight in strategic locations.
- 9. The facility will limit airborne contamination with an emergency kill switch for the HVAC systems.
- 10. A mass notification communications system will be provided to notify building occupants of threats and required response actions.
- 11. There is no mailroom in the facility.

7. Food Service

7.1 General

- A. It is the mission of this facility to provide varied hot nutritious meal service and entertainment venues to promote the good health, morale, and welfare of all patrons.
- B. The Kitchen will function using conventional Cook-Serve production methods. Food prepared fresh for each meal period.
- Storage rooms are provided for daily delivery of dry goods, refrigerated produce, meat and dairy, and frozen food items.
 Segregated storage is provided for paper supplies. Chemicals are stored in the Janitor closet.
- D. The Kitchen includes an office and staff toilet.
- E. The Kitchen production will be equipped with all required processing equipment, tables, sinks, and cooking equipment to offer a full menu selection of service.
- F. The cooking line is to be centrally located and is provided with a canopy exhaust hoods and fire suppression system.
- G. The serving area will be comprised of multiple stations.
 - 1. Pizza and Deli Sandwiches
 - 2. Burgers, Fries, Hot dogs, Nachos. Etc.
 - Hot Buffet and Salad Bar
 - 4. Self-Serve Beverages
- H. Patrons will be checked in as they enter the dining area, and proceed to the desired serving line. All items will be served on disposable products. Patrons will discard waste material in designated receptors when exiting the dining area.
- Ware washing for processing soiled pots, pans and utensils is to be segregated from the food processing area. Mechanical dishwashing equipment will not be required.
- J. A bar is provided for serving mixed drinks, beer and wine. The bar is to be convenient to the Dining and Slot Machine areas.

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8. STRUCTURAL

8.1 In personnel areas, the ground floor system will be a 100mm concrete slab on a polyethylene vapor barrier over compacted subgrade. In shop and warehouse areas, the slab will be 200mm.

8.2 Elevated Floor Systems

A. The elevated floor structures are expected to consist of precast reinforced slab bottoms composite with poured in place concrete. The cast in place portion is reinforced to provide ductility and connections to cast-in-place walls, beams and columns. Filler blocks of clay tile or polystyrene are used to block out portions of the cast concrete to reduce concrete material and weight. This slab system acts as a rigid diaphragm to distribute seismic- and wind- induced lateral loads to the concrete frame and walls.

8.3 Roof Systems

- A. The typical roof system is expected to be a low slope roof system supported by metal deck on structural steel beams supported by interior steel girders.
- B. The gymnasium, repair shops and warehouses all have need for long span roof systems for uninterrupted floor space below. In these areas, it is anticipated steel trusses will be used, spanning the short direction. Either purlins or deck will span between these trusses, depending upon spacing.

8.4 Structural System

- A. A reinforced cast-in-place concrete frame consisting of vertical columns and walls with horizontal beams will support the concrete floor slab system. The primary structural framing will be a cast-in-place shear walls to carry both gravity and lateral loads, and possibly interior cast-in-place columns for gravity loading. Seismic detailing will take into account both US and Italian requirements and the more conservative requirements will be used.
- 8.5 Preliminary foundation information anticipates conventional reinforced concrete strip and pad footings. This will be confirmed and an allowable bearing pressure established with completion of the final geotechnical investigation.

8.6 Design Loads

A. Design loads will be in accordance with the following:

- 1. ASCE 7-98 "Minimum Design Loads for Buildings and Other Structures."
- 2. International Building Code 2000
- 3. TM 809-02 "Structural Design Criteria for Buildings"
- 4. TI 809 □ 01 "Load Assumptions for Buildings"
- 5. FEMA 302 NEHRP-97 "Provisions for Seismic Regulation for New Buildings"
- 6. UFC 4-010-01 "DoD Minimum Antiterrorism Standards for Buildings"
- B. In addition to the loads specified, the structural system will be designed to support all superimposed dead and live loads, and will include an allowance for electrical, mechanical, and plumbing systems.
 - 1. Live Loads:

a.	Classrooms	1.92 kPa
b.	Corridors	3.83 kPa
C.	Offices	2.40 kPa
d.	Roof	1.00 kPa

e. Wind Lateral Loads.

i.	Basic Wind Velocity	35.8 m/s
ii.	Basic Wind Pressure	TBD

- f. Seismic Lateral Loads
 - i. Seismic Base Shear (equivalent lateral force method) V=CsW

ii. Site Class TBD
iii. Spectral Response Accelerations
Ss=0.22, S1=0.09

iv. Site Response Coefficients TBD v. Adjusted Spectral Response Accelerations

vi. Design Spectral Accelerations TBD vii. Response Modification 'R' TBD

g. Ground Snow Load 1.0 kPa

TBD

h. Frost Penetration 12.7cm

9. MECHANICAL

9.1 Design Criteria:

- A. The following references will be used in the preparation of the text submittal and subsequent construction documents for this project:
 - 1. MIL-HDBK-1190 Facility Planning and Design Guide, Sept 1987.
 - 2. TI 809-04 Seismic Design for Buildings, Dec 1998.
 - 3. SMACNA Seismic Restraint Manual for Mechanical Systems Second Edition, Feb 1998.
 - 4. LANTDIV Mechanical Engineering Design Guide, June 2001.
 - 5. NAVFAC P-89 Engineering Weather Data, July 1978.
 - 6. MIL-HDBK-1003/3 Heating, Ventilating, Air Conditioning, and Dehumidifying Systems, November 1995
 - 7. NFPA 90A Standard for the Installation of Air Conditioning and Ventilating Systems, 2002 Edition
 - 8. ASHRAE Handbooks.
 - 9. ASHRAE Standard 62-2001 Ventilation for Acceptable Indoor Air Quality.
 - 10. ASHRAE Standard 90.1-2001 Energy Standard for Buildings Except Low-Rise Residential Buildings
 - 11. SMACNA HVAC Duct Construction Standards Metal and Flexible, Sheet Metal and Air Conditioning Contractors' National Association, Inc. 1985.

9.2 Design Conditions:

A. Location:

NSA La Maddalena, Sardinia, Italy 39° 15' North Latitude 9° 03' East Longitude 3.0 m (10 ft.) Altitude

B.	Outside Design Conditions:	<u>°C</u>	<u>°F</u>
	Summer (1% Column):		
	Dry Bulb	30.8	88
	Wet Bulb (MCWB)	22.0	72
	Mean Daily Range	10.0	18
	Winter (2.5% Column):		
	Dry Bulb	3.9	39
	Summer (2.5% Column):		
	Dry Bulb	29.7	86
	Wet Bulb (MCWB)	20.3	69
	Summer (2.5% Column): Dry Bulb	29.7	86



	Mean Daily Range	<u>°C</u> 10.0		<u>°F</u> 18
	Winter (2.5% Column): Dry Bulb	2.8		37
	Annual Heating Degree Day	rs	2334	
C.	Inside Design Conditions:	<u>°C</u>		<u>°F</u>
	Summer: Dry Bulb Wet Bulb	23.9 16.9		75 62.5
	Winter: Dry Bulb	20.0		68

- D. Weather Data: Consistent with NAVFAC guidelines:
 - 1. Utilize weather data from 1% column for sizing of all heating and cooling equipment.
- 9.3 Energy Analysis and Life Cycle Cost (LCCID):
 - A. The program will conform to ASHRAE Standard 90.1-2001 "Energy Standard for Buildings Except Low-Rise Residential Buildings". A life cycle cost study will be conducted to validate HVAC systems selections submitted on E-1 form. A detailed descriptive text will be included with the 35% submittal.
- 9.4 Cooling and Heating Systems:
 - A. Cooling Plant
 - 1. Two air-cooled water chillers dedicated to the Base will be located on the roof of the Central Energy Building (Building "C"). Chillers will utilize HFC or R-134a refrigerants, which contain no chlorines and currently require no phaseout dates. The estimated cooling load for the new facility is 8,000 kW (210 tons).
 - 2. Chilled water distribution will utilize a primary/secondary pumping arrangement. The primary system will consist of two pumps, each dedicated to one chiller. The secondary pumping system will use three variable-speed pumps in parallel, each sized for 50% of the total flow. Secondary pumps will circulate chilled water from the primary loop to coils in AHU cooling coils and fan coil units.

 Air separators and bladder type expansion tanks will be provided for hydronic cooling system air control. A chemical shot feeder will be provided to introduce chemical water treatment, and to facilitate pipe cleaning after the initial installation.

B. Heating Plant

- 1. Building "C" will contain three fuel-oil-fired boilers to supply heating water to each building in the P995 project. Connected heating building load for the project is approximately 400 kW.
- 2. The heating hot water will circulate through a primary/secondary pumping system for distribution to heating coils in the buildings. The primary pumping system consists of two pumps, each dedicated to one boiler. The secondary system utilizes two variable-speed pumps in parallel, which circulate water from the primary loop to AHU heating coils, fan coil units and VAV terminal reheat coils.
- Air separators and bladder type expansion tanks will be provided for hydronic heating system air control. A chemical shot feeder will be provided to introduce chemical water treatment, and to facilitate pipe cleaning after the initial installation.

9.5 Air Handling Systems

A. General Air Handling System Description:

- 1. Cooling and ventilation for occupant comfort will be provided by air handling units (AHUs) in each building. The BEQ will utilize a cooling and heating fan coil unit (FCU) in each room. AHUs and FCUs will mix outdoor air with return air and draw through a chilled water cooling coil to cool and dehumidify the air before supplying air to conditioned spaces. Ventilation economizers will be considered to take advantage of days when outdoor conditions make it favorable to supply outdoor air for cooling, rather than running the chilled water coil.
- 2. Filtration will be provided upstream of AHU coils. For central station AHU's, the first stage of filtration will be a 2" thick pleated filter to provide 30% efficient particulate control. The second stage will be a 12" thick cartridge type filter to provide 65% minimum filtration for indoor air quality.

- B. Each central station AHU shall consist of double wall modular construction, mounted on base rail, and internal seismically restrained vibration isolation. The AHUs will be provided with access to all internal components; fans, coils, filters, and controls.
- C. Medium pressure/high velocity supply ductwork is proposed for the AHU's with variable air volume (VAV) operation. The high velocity ductwork will connect upstream to a series of variable volume air terminal valves with heating coils. Low pressure/low velocity ductwork will connect to diffusers downstream of variable volume air terminals.
- D. The VAV air terminal valves will be the single zone type with hydronic heating coils. Each air terminal valve will be equipped with a minimum airflow set point corresponding to the outdoor air ventilation rate required. The units will have double wall insulated casing construction, integral access door, with airflow measuring device and modulating damper. The heating coils will be activated only after airflow turndown, when space temperature drops to below 20 degrees Celsius (68 degrees Fahrenheit).
- E. Complete ducted low pressure/low velocity return air ductwork systems will be provided for each AHU. Ductwork will extend from room air inlets to each AHU suction section.
- F. Occupant ventilation will be provided in accordance with ASHRAE Standard 62-2001, Ventilation for Acceptable Indoor Air Quality. Outdoor air will be ducted to each AHU inlet. The minimum AHU supply airflow setpoint will be equal to, or greater than, the AHU outdoor air requirement.
- G. VAV air handling systems will each utilize a static pressure sensor in the AHU mixed air plenum to control a motorized damper in the return air duct. This damper will modulate in response to the static pressure sensor to maintain a constant negative pressure in the return plenum. This control sequence will maintain a constant supply of outdoor air during part load conditions.
- H. Rooms that house temperature/humidity sensitive electrical equipment and/or motor controllers will utilize fan coil units for point-of-use cooling.

9.6 Exhaust System Description:

A. Exhaust fans will be provided for toilet areas, locker rooms, and janitor closets, as well as other areas required by the program. Ducted exhaust air systems are proposed; from room air inlets to

the exhaust fan inlets. Exhaust fans will be located on the roof. A stack from each fan will discharge the exhaust air upward.

9.7 Temperature Controls System:

- A. A Direct Digital Control (DDC) system is proposed. The LANTDIV guide specification will be used. A portable laptop computer will be provided for DDC system interrogation and data processing. DDC controls will be provided for all mechanical equipment.
- B. A stand-alone building controller will be provided in each building. Individual DDC controllers, with standalone operational capability will be provided for each AHU, chiller or boiler.
- C. The DDC system will serve as a total building management system by metering utilities, including: water usage, lighting and energy management.

9.8 Electrical Motors:

A. 380 volt/3 phase/50 cycle for motor sizes 0.35 kW (1/2 horsepower) and greater in size. 220-volt/1 phase/50 cycle for motor sizes up to 0.35 kW (1/2 horsepower).

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10. FIRE PROTECTION

10.1 Design Criteria:

A. The following references will be used in the preparation of the text submittals and subsequent construction documents for this project:

MIL-HDBK-1008C	Department of Defense, Fire Protection for Facilities Engineering, Design and Construction; 10 June 1997.
MIL-HDBK-1190	Department of Defense, Facility Planning and Design Guide; Sept 1987.
NFPA 13	Standard for the Installation of Sprinkler Systems 2002 Edition.
NFPA 14	Standard for the Installation of Standpipe, Private Hydrant and Hose Systems 2000 Edition.
NFPA 20	Stationary Pumps for Fire Protection 1999 Edition.
NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances 2002 Edition.
NFPA 30	Flammable and Combustible Liquids Code 2000 Edition.
NFPA 72®	National Fire Alarm Code® 2002 Edition.
NFPA 101®	Life Safety Code® 2000 Edition.
NAVFAC P-355	Seismic Design for Buildings; Feb 1982.
SMACNA	Seismic Restraint Manual for Mechanical Systems.

10.2 Fire Protection Design:

A. Currently a system of salt water hydrants is maintained by local Italians and will be utilized for hydrant flow stream requirements. For interior sprinklering, treated water is supplied to a booster pump, then to the rest of the Base domestic water through a 150mm pipe from a one-million liter treated water tank outside of the South end of the Base grounds. City water originally is stored in a one-million liter untreated water tank, water from which is then treated by the Base's granular-activated- charcoal (GAC) system, then pumped back to the treated water tank. A reverse-osmosis (RO) water maker was recently installed on Base to provide potable water when city water supplies are diminished. Existing pump, tank and piping conditions will be analyzed to ensure that adequate pressure exists to supply P995 facilities at the North end of the Base.

- B. P695 buildings will be fully protected with fire sprinklers as required by NFPA, Mil-hdbk 1008C and Italian decrees. Typically occupied spaces are designated Light Hazard occupancies. Mechanical equipment rooms shall be protected as Ordinary Hazard occupancies. Industrial shop and/or storage spaces shall be protected as Extra Hazard occupancies; Extra Hazard occupancies will utilize passive protection, by virtue of 4-hour fire construction. All P995 buildings are less than three stories in height, and therefore do not require a standpipe system in the stairwells; yet it is cost effective and good engineering judgement to consider standpipes in all stairwells.
- C. The sprinkler system shall be designed to withstand seismic activity and shall be coordinated to give full consideration to blind spaces, piping, electrical equipment, ducts, and other construction and equipment in accordance with detailed working drawings to be submitted for approval. Location of sprinkler heads shall be in a consistent pattern with ceiling grid, lights, and air supply diffusers and other ceiling devices.

10.3 Fire Detection and Alarm Systems

- A. All buildings will be provided with an Addressable, Class A, fire alarm system as required by NFPA 101 and NFPA 72.
- B. Building fire alarm and detection systems will be designed in accordance with NFPA 101, NFPA 72, MIL-HDBK 1008C, and Lantdiv design criteria.
- C. Each building will be provided with both automatic and manual initiation of building alarms. Indicating devices will consist of combination horn/strobes as well as individual strobes located in accordance with ADA criteria as interpreted by the United States Navy.
- D. Italian law does not allow water fire protection to be located in electrical, communications rooms, or elevator shafts and machine rooms. Smoke or heat detection will be provided for all electrical and communications rooms. Smoke detectors will be provided in all elevator lobbies and in the elevator machine room to initiate elevator recall.

11. **PLUMBING**

GeneralDesign Criteria: The following references will be used in the preparation of the text submittals and subsequent construction documents for this project:

> MIL-HDBK-1190 Department of Defense, Facility Planning

> > and Design Guide; Sept 1987.

NAVFAC P-355 Seismic Design for Buildings; Feb 1982. Seismic Restraint Manual for Mechanical **SMACNA**

Systems

A&E Guide A&E Firms Performing Services for

Atlantic Division

NAVFAC DM 3.01 Plumbing Systems Design Manual; May

IPC International Plumbing Code, 2000. **IFGC** International Fuel Gas Code, 2000.

11.2 Domestic Cold Water System

- Treated water supplies the Base domestic water through a A. 150mm pipe from a one-million liter treated water tank outside of the South end of the Base grounds. City water originally is stored in a one-million liter untreated water tank, water from which is then treated by the Base's granular-activated-charcoal (GAC) system, then pumped back to the treated water tank. A reverse-osmosis (RO) water maker was recently installed on Base to provide potable water when city water supplies are diminished. Connection to the base domestic water distribution system will be coordinated with Civil Engineering design. Existing line size and available pressure will be analyzed to ensure that existing tank and piping are adequate for the new P995 facilities. Backflow preventers, located in each mechanical room, will be provided in the cold water supply to each building prior to any use in the buildina.
- The domestic cold water system will also supply make-up water to В. the hydronic heating and cooling systems. A reduced pressure backflow preventer and shutoff valve will be provided in the central energy building and coordinated with HVAC design for hydronic systems.

Domestic Hot Water System 11.3

The domestic hot water system will be fed from the domestic cold Α. water system downstream of the backflow preventer. Line sizing will be based on calculations for building demand in accordance with Design Criteria. Water will be heated to a temperature of not greater than 44 degrees Celsius (111 degrees Fahrenheit) at the

- point of storage, except for specific exceptions described below.
- B. Hot water storage tanks will utilize hydronic heating water from boilers through a U-tube heat exchanger to generate domestic hot water. This arrangement avoids the Italian requirement to have a separate room for fuel-fired hot water tanks.

11.4 Sanitary Sewer

A. Existing Base sanitary sewage is treated by the Base water treatment plant. Since no additional sanitary loads are being introduced, sufficient water treatment capacity exists for the P995 project. Connection to the sanitary sewer distribution system will be coordinated with the Civil Engineering design. Line sizing will be based on calculations for building demand in accordance with Design Criteria.

11.5 Storm Sewer

A. New roof drains and downspouts will be required by each P995 building. Connection of roof drains and downspouts to the storm drainage system will be coordinated with the Civil Engineering design. Interior and exterior rainwater leaders will be located to coordinate with building architecture. Line sizing will be based on calculations for building demand in accordance with Design Criteria.

12. ELECTRICAL

12.1 Existing Site Utilities

- A. Santo Stefano is currently supplied by one 20kV feed from ENEL through the Italian Navy substation. NSA La Maddalena does not pay ENEL directly for power consumption. The bill is paid to the Italian navy. The Italian Navy substation has a maximum capacity of 750kVA. Of that amount, around 400kVA is allocated to the U.S. Navy.
- B. The ENEL feed terminates in one substation. The substation consists of a 20kV primary switch, a 1000kVA transformer, and 380V secondary switchgear.
- C. This substation serves all buildings on the site.
- D. The system is backed up by several engine generator sets.
- E. A separate power generation plant, the cold iron support facility, provides shore power to the USS Emory Land and accompanying submarine vessels independent of the base-wide distribution system. Shore power is generated by six Caterpillar 1000kW, 0.8 pf diesel engine generator sets. The generators are paralleled and connected to a common bus through synchronized control switchgear. All synchronizing is performed manually by adjusting engine speed and voltage. The synchronizing control switchgear distributes power to four unit substations at 2500 kVA, 4160 – 480 volts, 60Hz. These four unit substations then provide shore power to the USS Emory Land and associated loads. Power from the generator power bus is also supplied to two transformers (TR-5 and TR-6) at 250kVA, 4160 - 208/120 volts, 60 Hz each, which supply power to the trailer-mounted boiler units and associated loads. A 75kVA motor-generator set in the generator switchgear trailer is used as back-up power supply to panels CP-1 and CP-2. which are normally fed from TR-5 and TR-6 through distribution panels DP-1 and DP-2.
- F. The existing generators are Caterpillar Model 3512, Prime Duty, 1000 kW, 0.8 power factor, 4160V, 173A, 60Hz, operating at 1800 RPM. There has been concern expressed that the generators suffer from overheating in the summer months, create audible noise greater than Italian approved standards, and have had the generator portions of the motor-generator set short out due to moisture infiltration from wind blown rain.
- G. The existing synchronizing gear was manufactured in 1994 by IMES, 71043 Manfredonia Via Scaloria, Telephone 0884 2402, whom have since gone out of business.

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- H. The existing Port Services Barge is fed from both a dedicated diesel generator, which provides 480V, 60Hz and from the Cold Iron Support Facility through existing Substation 4. When the tender is in port, Port Services receives power through its generators. In addition to Port Services, the existing Reverse Osmosis Unit also receives it power in the same manner.
- I. All existing primary and secondary feeders are routed underground.

12.2 Site Utilities

- A. Two new similarly sized Caterpillar generators will be provided. Generators will match the existing generators, and be paralleled to the common generator bus. Additional control gear and circuit breakers will be required in the synchronizing switchgear. The generators and some portions of the control switchgear will be proprietary to match the existing equipment and allow the user to utilize the same method of operation as the existing system. The generators provided, will be equipped with marine grade enclosures that incorporate design functions to limit ambient noise to acceptable levels, provide adequate cooling capacity for the warmest months of the year, and prevent excessive moisture infiltration. These same enclosures for the new generators will also be provided to replace the enclosures of the existing generators so that the same design problems will be eliminated. All existing substations and transformers associated with the cold iron support will remain and not be affected. The existing 75kVA motor generator set in the generator switchgear trailer will be replaced with a static electronic frequency converter to facilitate the installation of the additional switchgear and paralleling gear for the new generators.
- B. A substation will be provided to feed the new buildings. The substation will consist of a 20kV primary switch, a 1250kVA transformer, and 380V secondary switchgear. Due to the new load exceeding what is available from the Italian Navy substation, a dedicated feed from ENEL will be required. This feed will enter the site from the north side. This project will provide a 3m by 3m equipment pad for the ENEL equipment. This project will also provide a primary duct bank from the north side of the site to the new substation as well as a 15kV automatic circuit breaker located in the ENEL equipment enclosure.
- C. The project scope includes a 750kW generator to provide backup power to selected loads in both buildings.

- D. A building management system will be included for the new buildings to include monitoring of utilities. Monitoring will be done in the Public Works Department.
- E. When the Port Services Facility moves out of the barge, there will still be a requirement for 480V, 60Hz power in their new facility. The initial plan was to provide a frequency converter sized to support these loads. However, since the Reverse Osmosis Unit will still require 480V, 60Hz, the existing generator supporting Port Services must remain. Because of this, the project can save the money and space required for the frequency converter and feed the required loads requiring 60Hz in Port Services from the existing Substation 4. Substation 4 currently serves all of Port Services.
- F. Shore power will be provided for the LCM's. Shore power is 110V, 60Hz. A 200A circuit breaker will be provided in Substation 4 to feed a 480V panel located in Port Services to support all required new 60Hz loads. A 480V 208Y/120V transformer and a 208Y/120V panel will be provided in Port Services to feed shore power to the LCM's and any required 120V loads in Port Services.
- G. All primary and secondary feeders will be routed underground.

12.3 General

- A. Building M and Building W will have a main electrical room fed from the substation via underground secondary feeders. The main electrical room will have a normal main distribution and emergency distribution panels, which will feed electrical rooms in each part of the building.
- B. The majority of the building will be served from the 380Y/220V distribution system. Some loads will be served from the 380Y/220V emergency distribution system including selected lighting, receptacles and specific equipment. A 208Y/120V normal and emergency distribution will be included to serve 120V USA type receptacles.
- C. All receptacles in office and working spaces will be dual voltage consisting of one 20A, 1P, 220v Italian receptacle, and one 16A, 1P, 120v USA type receptacle.
- D. Lighting in the administration areas will primarily consist of recessed fluorescent troffers.

- E. All exit signs will be LED type and will be procured from a US source since these fixtures are not manufactured in Italy or Europe.
- F. A lightning protection system will be provided for each building.
- 12.4 Building M: Fitness Center, Transient Bachelor Quarters, Dining Facility, Fleet Recreation Center.
 - A. The fitness center will be provided with flush mounted floor receptacles to support equipment in open areas. These receptacles will be dual voltage to support both USA and Italian receptacles. The indirect lighting will be provided in the weights and cardio area in the Fitness Center. High bay style metal halide lighting fixtures designed to provide approximately 300 to 400 lux will illuminate the basketball court. All lighting will be provided with protective wire guards in the basketball court.
 - B. The Transient Bachelor's Quarters will be designed to meet the Standard Navy BEQ 2+0 guide plate.
 - C. 220V single-phase receptacles will be provided for a laundry room with 24 washers and 48 dryers in the Fleet Recreation Center. The open seating areas in the Fleet Recreation Center will have down lights with dimmer control to provide mood lighting and recessed fluorescent troffers to provide conference room lighting for large assembly gatherings. We will provide the raceway system for the sound, lighting and video package. The generator will provide back up power to the refrigerators, freezers and selected lighting for egress in Building M.
- 12.5 Building W: Port Services, General Warehouse, and Hazardous Materials Storage.
 - A. Port Services maintenance will need 480V, 60Hz power. A 480V distribution panel fed from DP-6 in Substation 4 will be provided in Port Services to feed required loads.
 - B. The Warehouse will utilize high bay metal halide fixtures with quartz restrike lamps. The generator will provide emergency lighting.
 - C. The Hazardous Materials Storage building is a storage facility containing paints, solvents and oils. All electrical materials provided in this area will be suitable depending on the classification of Hazardous materials. The exhaust fans to ventilate the hazardous fumes will on the generator.

13. COMMUNICATION

13.1 Existing Site Utilities

A. Telephone and data service to Santo Stefano is provided from a microwave signal from La Maddalena. The microwave signal is received at Santo Stefano via a microwave antenna on the roof of the communications shack. The signal is terminated in a shack, which serves as the origination point for voice and data service to Santo Stefano. The voice service is through copper cables. 2-100 pair cables terminate at a junction cabinet near the tender. This junction cabinet serves the ship. 4-30 pair cables serve the ship and 1-25 pair cable serves the existing building. Some of the cables are underground, and some of the cables are exposed, lashed to buildings. All data cables are fiber optic, and are routed underground. The existing copper and fiber optic cables and ducts servings the buildings are to be demolished and removed as required.

13.2 General

- A. Buildings and site will be provided with complete structured cabling system. All design will be in accordance with the most recent EIA/TIA standards. Origination point will be microwave shack at the microwave antenna. Outside plant copper cabling for telephone and fiber optic cabling will be provided to each new building in a loop configuration. A 200-pair cable and a 24-strand multimode fiber will be provided to the patch panel near the tender to serve the tender. All new outside plant cabling will be in underground concrete encased duct banks.
- B. NCTAMS will have to make a determination if the capacity of the existing telephone switch is sufficient to support the new facilities. The existing switch has 200 telephone lines. A preliminary estimate based on the area of the new buildings is a requirement of 200 lines. The scope of this project does not include funds to upgrade or expand the existing switch. NCTAMS will include any upgrades in a separate funding source.
- C. This project will provide support for Security electronic sensors and surveillance equipment. This support includes power connections, raceway systems, and fiber optic cabling. Shoreline support includes radar, sonar, thermal imaging, and CCTV. All monitoring will be done in the command room. An equipment room with raised floor of approximately 28m² for equipment. Space for two 49cm racks will be required in the existing microwave shack. If space is not available, space will have to be provided. All security equipment will require 100% emergency

- power. The electronic security system design, procurement, and installation will by done by NCIS.
- D. CCTV cameras will be connected via fiber optic cable. One single strand, multimode fiber optic cable is required for each camera. All cameras will terminate in the security equipment room. Approximately 12 cameras will be required to cover the site. Some of the required security equipment may be installed prior to this project. The cameras will be part of the electronic security system.
- E. Outlet boxes for voice and data cables will be provided throughout all buildings. Outlet boxes will be designed to contain a voice, 2 data, and 3 spare jacks. A minimum of two outlet boxes will be provide on opposite walls of each office, and on three meter centers in open offices and other open areas.
- F. Communications closets will be provided for Administration spaces in accordance with EIA/TIA 569A. A minimum of one 10.2 m² closet will be provided for each Administration area. Closets in two story buildings will be stacked to facilitate cable routing.
- G. The conduit and pathway system for each building will consist of outlet boxes with 25 mm conduit stubbed out into a corridor cable tray system, which terminates in the communications closets. All cables will be routed in conduit back to the communications closet.
- H. A conduit and pathway system for security cameras located inside the buildings will be provided in required areas to monitor specific locations.
- I. All conference and training rooms will be designed to accommodate video teleconferencing.
- J. The microwave antenna may have to be raised if the new Hazardous Materials Storage Building is in the line of site of the antenna.
- K. Cable Television systems will be provided in required areas
- 13.3 Building M: Fitness Center, Transient Bachelor Quarters, Dining Facility, Fleet Recreation Center.
 - A. The Transient Bachelors Quarters will be designed to meet the Standard Navy BEQ 2+0 guide plate. A conduit and raceway system for the BEQ will be provided for closed circuit television.

- B. A conduit and raceway system for the theater in the Fleet Recreation Center will be provided for a big screen TV and surround sound provided by MWR. 10 internet stations and a video gaming area will be located in the center. A public address system and raceway system for closed circuit television will be provided in the Fleet Recreation Center.
- 13.4 Building W: Port Services, General Warehouse, Hazardous Materials Storage.
 - A. A public address system will be provided in Port Services and microphone located in training room. A conduit and raceway system for closed circuit television will be provided for training purposes. The main equipment will be located in the LAN/CCTV room.
 - B. All rooms in the Squadron Area will require a SIPRNET connection. The SIPRNET outlets will be located at each workstation. A 12-strand multimode fiber will be provided to the secured communications room located in the Squadron Area. An intrusion detection system will be provided to secure the Squadron Area.

14. COLD IRON SUPPORT ELECTRICAL SUPPLY ALTERNATIVE

14.1 Overview

- An alternative to the power supply for the Cold Iron Support was Α. proposed by EFAMED Utilities Branch. This alternative was initially proposed in or around 1998. This alternative would be to provide a dedicated commercial feed from the Italian power company, ENEL, to provide all normal power to the USS Land and supporting functions which require a service of 4160V, 60Hz. The current scenario has all loads for the USS Land served from six engine generator sets each at 1000kW, 4160V, 60Hz. P-995 is currently scoped to provide two new engine generator sets, each to match the size of the existing units. The two new generators do not increase the current capacity of the generation plant due to the ampacity and short circuit bracing limitation of the common generator bus in the existing switchgear. The dedicated 15 kV, 50Hz feed from ENEL would be connected to transformers and frequency converters to provide the 4160V, 60Hz. dedicated feeder and associated transformers and frequency converters are provided, the six existing generators would remain as backup only. The scope for P-995 would be revised to delete the two new 1000kW engine generator sets, delete replacement of six existing generator enclosures, delete the required distribution switchgear and synchronizing switchgear and provide medium voltage switchgear and transfer switches to connect the ENEL feed to the system. The funds allocated for this work would then be applied to the dedicated ENEL electrical supply. The system would then be configured as normal feed from ENEL, emergency backup feed from the generator plant.
- B. The exact cost of the previous proposal could not be determined by the time of this Basis of Design. Based on recollection of the EFAMED Utilities Engineer, the cost was between \$700,000 and \$3 million. The current cost estimate for P-995 has approximately \$1.4 million for the two new generators, six generator enclosures, and distribution and synchronizing switchgear.
- C. The initial proposal was rejected. The factors leading to rejecting the proposal included a high first cost and unrealized savings in operating costs. These factors will have to be reevaluated due to deregulation of the Italian electrical utility, the possibility of utilizing funds from P-995, sizing the frequency converters and transformers closer to the average load, and that the ENEL cable will already be available at the site.
- D. There are many advantages to a dedicated ENEL feed. There are also many challenges which must be resolved in order to make this alternative feasible.

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14.2 Advantages of a Dedicated ENEL Feed

- A. The following are some of the major advantages of a dedicated ENEL feed:
 - a. Since the generators will only be in operation during a power outage, the current noise problem due to the generators constantly running will be greatly reduced. In addition to reduced noise, the amount of exhaust emissions to the atmosphere will also be greatly reduced. The reduction of noise and exhaust emissions will provide in an increased Quality of Life for all of those working and living at the site on Santo Stefano.
 - b. Increased redundancy will result in changing the configuration to ENEL normal feed, generator standby.
 - c. Because of the reduced operating time of the generators, maintenance will be greatly reduced.
 - d. Overall operating costs could be greatly reduced, depending on the cost of consumption from ENEL as compared to the savings realized from much lower fuel consumption and generator maintenance.
 - e. The generator currently serving the Port Services Barge and the Reverse Osmosis (RO) Unit which must remain after P-995 could be completely eliminated if a dedicated ENEL feed is provided. This would even further reduce operating cost and maintenance.
- B. Under this alternative, all normal power feeds to Santo Stefano will be consolidated.
- 14.3 Equipment Requirements for Frequency Converter and Transformers
 - A. The initial proposal from 1998 indicated providing transformer and frequency converter capacity of 7500kVA. This value is equal to the current capacity of the existing generation plant (6 units each at 1000kW, 0.8pf results in 7500kVA). A report of the daily loads from 2002 provides some historical data on the actual loads connected to the existing generation plant. The average monthly load from 2002 was around 1.5kW. A peak demand of 3.95kW occurred on 15 September, 2002. Based on this historical load

- data, it is evident that frequency converter and transformer capacity of 7500kVA far exceeds the demand.
- The loads connected to the generation plant are extremely B. predictable. The loads are a factor of the number of ships and submarines connected to the plant. It is always known well in advance what the expected load will be. Based on this fact, the transformers and frequency converters could be sized to serve the expected normal average load. Sizing based on this load will greatly reduce the initial cost of the proposed dedicated ENEL feed. Sizing the frequency converters and transformers according to the normal average load will essentially place a maximum available capacity on the dedicated ENEL feed. Based on the average demand and peak demands from 2002, this size limitation could be anywhere from 2500kVA to 4,000kVA. Further study will be required to determine the exact acceptable maximum capacity. If it is anticipated that this maximum capacity will be exceeded, the loads could simply be transferred from the ENEL supply to the generation plant for the period of time the loads will be connected.

14.4 Routing of ENEL 15kV Feeder to Santo Stefano

- A. The price in the initial proposal included the cost of providing a submarine cable from the island of La Maddalena to Santo Stefano. Since the time of the initial proposal, the submarine cable has already been installed.
- B. The load requirement for P-995 necessitates a dedicated ENEL feed just to support the loads in P-995. Due to this fact, the 15kV ENEL feeder will already be provided to the Santo Stefano site. This alternative for a dedicated ENEL feeder will no longer require the effort and expense to route cable to the site. An additional switch section will be required in the ENEL switchgear provided to support P-995.
- 14.5 Ownership and Maintenance of Frequency Converters and Transformers
 - A. A meeting was held at Santo Stefano with representatives from EFAMED Utilities Branch, LANTDIV Electrical Branch, RLF, and ENEL, as well as the Public Works Officer, NSA La Maddalena. Possibilities for ownership and maintenance of the required frequency converters and transformers were discussed. There are two possibilities of equipment ownership and maintenance.
 - B. The converters and transformers are owned and maintained by NSA La Maddalena.

- C. The converters and transformers are owned and maintained by ENEL. This was the case in the initial proposal for this alternative.
- D. The Public Works Officer, NSA La Maddalena expressed his concerns with ownership and maintenance by NSA La Maddalena. His major concern was with his ability to maintain the equipment due to potential future budget reductions. If the equipment was owned and maintained by ENEL, the maintenance expense would be part of the utility bill. The budget for utility costs can not be reduced. However, the NSA La Maddalena maintenance budgets are commonly reduced.
- E. Deregulation of the Italian electrical utility may present problems with ENEL owning and maintaining the converters and transformers. After deregulation, ENEL will continue to own and maintain the entire electrical distribution network in all of Italy. Other electrical supply companies will have ability to provide service to customers on an open market. Since ENEL will still own the distribution network, customers must pay a fee for distribution to ENEL as part of their utility bill. This fee is fixed and approved by the Italian authority of electrical distribution. It will have to be determined whether or not ENEL may legally increase their fee for this special situation where they are supplying equipment to change the supply voltage and frequency. In addition to the issue of an increased fee, it may not be legal for ENEL to own and maintain the frequency converters and transformers, although it seems logical to assume that these pieces of equipment are an integral part the ENEL distribution network.

14.6 Location of ENEL Frequency Converters and Transformers

- A. The frequency converters and transformers must be located on the U.S. Navy portion of Santo Stefano. Due to severe restrictions imposed by the Italian National Park on the land outside of the Navy fence, there is no possibility of locating the equipment outside the Santo Stefano site.
- B. Concern was expressed about allowing ENEL maintenance personnel access to the Santo Stefano site. The Public Works Officer said that permanent passes could be issued to the ENEL personnel similar to the BOSC employees. In order to do this, the same ENEL crew must always perform the required maintenance.
- C. Space on Santo Stefano is extremely limited. The only possible location for the frequency converters and transformers is on the northern most end of the Santo Stefano site. Currently two metal buildings occupy this location, both of which are used by the BOSC as maintenance shops.

- D. The exact space required for the frequency converters and transformers is yet to be determined. The previous proposal indicated a required space of 15m long by 9m wide. The previous proposal was to locate the equipment in the existing northern most maintenance shop building which is currently the Tire Shop. A survey of the site revealed that the existing building previously planned to be utilized is 12.9m long by 6.7m wide. ENEL is verifying the size of the equipment and the actual space required. If the equipment is reduced from 7500kVA in size, the required space previously proposed will be reduced.
- E. The worst case is that NSA La Maddalena would have to function without the Tire Shop. If the actual space requirement is less than currently anticipated, a possible solution would be to divide the Tire Shop building. This would make space for the frequency converters and transformers, and reduce the size of the Tire Shop.
- F. It was suggested that the proposal for a dedicated electrical supply include demolition of the Tire Shop and construction of a new equipment building. The Public Works Officer indicated that this would require Mixed Commission Approval and that this approval was not likely to happen.
- G. Space will also be required for the 4160V distribution switchgear and transfer switches. A possible location would be the area planned for the two new 1000kVA generators. The existing pads could be removed, or a new pad could be placed between them to form one pad. The required switchgear and transfer switches could be located on this pad.

14.7 Standby Operation of Existing Generator Plant

- A. The existing generator plant is currently capable of only manual operation. If this alternative is eventually instituted, the manual operation of the generation plant as a standby plant would remain. It would be cost prohibitive to replace all of the existing 4160V manual paralleling switchgear with automatic paralleling switchgear.
- B. In order to function as a manually operated standby plant, the normal power would have to be continually monitored at a 24 hour manned location. Once a power outage occurred, an alarm would annunciate. The plant operator on duty would wait a predetermined time to give the normal power an opportunity to be restored before transferring the loads to the generation plant. The total amount of time required to transfer the loads to the generation plant could be up to approximately ten minutes. It

- would have to be determined what the exact duration of a power outage the USS Land could sustain.
- C. One possibility to reduce the time required to switch to the standby plant would be to provide a start signal to the generators immediately upon loss of normal power. The number of generators to start could be predetermined by selector switches based on the connected load at the given time. This would allow the generators to be available sooner than relying on a plant operator to manually start each generator. Once the generators start, the plant manager can perform the manual synchronizing operation and have the generators ready to assume the load. After the predetermined time after the loss of normal power, the plant operator could activate the transfer switches to transfer the load to the generation plant. This operating sequence could bring the time required to transfer the load down to five minutes or less.

14.8 Ability to Revise the Scope of P-995

- A. It is yet to be determined whether the scope for P-995 can be revised to accomplish the work required for the dedicated ENEL electrical supply. LANTDIV will determine whether or not it is possible. If a scope revision is not possible, an amendment or a construction change order might be.
- B. If this alternate approach for power supply to Cold Iron Support appears to be feasible, a determination will have to be made on how the design for P-995 proceeds, and who provides the design. Currently LANTDIV is doing the design for the Cold Iron Support generator work, while RLF is doing the remainder of the design. A timely decision must be made in order to complete the design so this work can be a part of the P-995 contract. It could be designed into the contract as a bid option, it could be designed as an amendment, or it could be a change order to the contract.

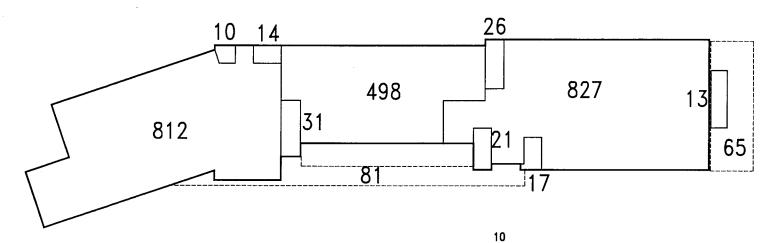
14.9 Summary

- A. The alternative of a dedicated ENEL feed for Cold Iron Support is an attractive option for NSA La Maddalena. There are many advantages and many challenges involved with this alternative.
- B. The factors for rejecting the previous proposal have changed in the last five years. These changed factors include:
- C. The funds for P-995 for Cold Iron Support which could possibly be used to offset the initial cost of equipment.
- D. Historical Cold Iron Support load data can be used to size the equipment required closer to the expected load. This would

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P-995, WATERFRONT RECAPITALIZATION NSA La Maddalena, Italy

- reduce the first cost and relieve some of the pressure due to space requirements and limitations.
- E. The feeder to the site at Santo Stefano will already be provided as a result of P-995.
- F. Deregulation of the Italian electrical supply market.
- 14.10 If the challenges can be overcome in a timely and acceptable manner to all parties involved, and the changed factors from the previous proposal provide a positive economical benefit, the commercial feed from ENEL is the best way to meet the power needs for Cold Iron Support.



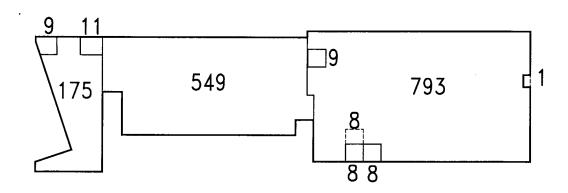
SHARED UTILITIES BETWEEN FITNESS AND BEQ $\frac{+14}{+31}$ $\frac{+31}{55}$

SHARED UTILITIES BETWEEN DINING AND BEQ $\begin{array}{c} 21 \\ +17 \\ +26 \\ \hline 64 \ /2 = 32 \end{array}$

FITNESS:	BEQ:	DINING	CANOPIES
	498	827	
812	+27	+32	81
+27	+32	+13	+65
839	557	872	146

DEPARTMENT		AREA
FITNESS:	839	GSM
BEQ:	557	GSM
DINING:	872	GSM
CANOPIES:	146	GSM

BUILDING "M" GROUND FLOOR GROSS AREA CALCULATIONS



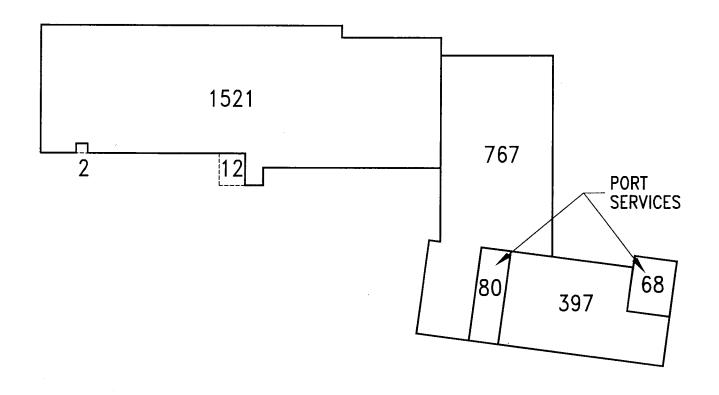
SHARED UTILITIES BETWEEN FITNESS AND BEQ
$$\frac{11}{+9}$$
 $\frac{20}{20}$ /2 = 10

SHARED UTILITIES BETWEEN FLEET AND BEQ $\frac{9}{26}$ /2 = 13

FITNESS:	BEQ:	FLEET REC:
		793
	549	-8
175	+10	+1
+10	+13	+13
185	572	799

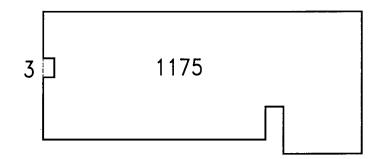
DEPARTMENT	AREA	GRD FLR AREA	TOTAL AREA
FITNESS:	185 GSM	+839 GSM	1,024 GSM
BEQ:	572 GSM	+557 GSM	1,129 GSM
FLEET REC:	799 GSM	+0 GSM	799 GSM

BUILDING "M" FIRST FLOOR GROSS AREA CALCULATIONS



DEPARTMENT	AREA
PORT SERVICES:	1,669 GSM
WAREHOUSE:	767 GSM
HAZ-MAT:	397 GSM
CANOPIES:	14 GSM

BUILDING "W" GROUND FLOOR GROSS AREA CALCULATIONS



DEPARTMENT AREA GRD FLR AREA TOTAL AREA

PORT SERVICES: 1,178 GSM +1,669 GSM 2,847 GSM

BUILDING "W" FIRST FLOOR GROSS AREA CALCULATIONS

			T	T	
PROG	RAM AREAS - 20 Februa	ry 2003			
	ITANI AITEAS - 20 I EDIGA	1 y 2000		-	
P-995				1	
WATE	RFRONT RECAPITALIZA ⁻	ΓΙΟΝ, La	Maddalena	a, Italy	
				Ī	
<u>GROS</u>	S AREA (GSM)				
BUILDING	as:		GSM	GSM	
			PROGRAM	<u>ACTUAL</u>	
	CENTRAL ENERGY BUILDING		0.00	130.00	
	BUILDING M		3577.00	3825.00	
	BUILDING W		4514.00	4008.00	
TOTAL (GROSS SM		8,091	7,963	
1391 PR(OGRAMED AREA - GSM		8091.00	8091.00	
TOTAL D	EVIATION (OVER) - GSM		0.00	-128.00	
	WALKWAY CANOPY		0.00	160.00	
	GRAND TOTAL			8123.00	
			PROGRAM		
Rm. No.	ROOM / AREA NAME		NET SM		
	CENTRAL ENERAGY BUIL	DING			
	Boiler Room				
	Pump Room				
	Electrcial Room			1	
	Controls				
	Structure / Partitions				
	CEB TOTAL - GSM		0.00		
	OLD IOTAL - GOIN		0.00		
	DIUI DING M	 			
	BUILDING M				
	FITNESS CENTER				
	Activity Areas		105.55		
	Basketball Court (High School)		405.00		
	Spectator Seating		29.00		
	Equipment Storage / Gear Issue		22.00		
	Cardiovascular Training		60.00		
	Weight Training		100.00		
	Activity Areas - Total		616.00		

			PROGRAM		
Rm. No.	ROOM / AREA NAME		NET SM	-	
	Activity Support Areas				
	Patron Support:		74.00		
	Lockers - Male		700	 	
	Lockers - Female				
	Toilets - Male				
	Toilets - Female				+
	Showers - Male				
	Showers - Female				
	Administration	-	34.00		
	Administration		34.00		
	Activity Support Areas - Total		108.00		
	Activity Support Areas - Total		100.00		
	Building Support Functions				
			108.00		
-	Lobby/Circ./ Struct./Partitions	 	100.00	-	
_	Lobby / circulation	<u> </u>			
	Structure / Partitions	5	70.00		
	Mech./Elec./Communications	_	72.00		
	Mechanical Room				
	Electrical Room (2)				
	Comm.Room (2)				
	Activity Support Areas - Total		180.00		
	FITNESS CENTER TOTAL		904.00		
	TRANSIENT BACHELOR QUAI	RTERS			
	22 Modules (48 GSM ea)		1056.00		
	2 Handicap Modules (48 GSM ea	a)	96.00		
	22 Modules				
	2 Handicap Modules	5			
	Lobby / circulation				
	Structure / Partitions	3			
	Storage				
	Office				
	Public Toilet (Unise	()			
	Linen Storage				
	Janitor's Closet (2)				
	Mechanical Room				
	Electrical Room (2)				
	Comm. Room (2)			+ +	
	23 (2)				
	TRANSIENT BQ TOTAL		1152.00		
L		 	1.02.00		_

				PROGRAM		
Rm. No.	ROOM / AREA NAME			NET SM		
	DINING FACILITY					
	Receiving Area			8.00		
	Dry Storage			15.00		
	Refrigerated Storage			9.00		
	Freezer Storage			11.00		
	Paper Storage			6.00		
	Office			8.00		
	Staff Toilet			9.00		
	Janitor Closet			6.00		
	Food Production / Prep Area			63.00		
	Food Holding			11.00		
	Dish Wash / Pot Wash			22.00		
	Cart Wash			6.00		
	Trash Area / Can Wash			4.00		
	Serving			50.00		
	Main Seating Area			149.00		
	Public Toilet - Male			17.50		
	Public Toilet - Female			17.50		
	Bar / Bar Seating			30.00		
	Slot Machines			30.00		
	Video Games			25.00		
	Billiards / Darts			45.00		
	Spaces Net to Gross			217.00		
	Lobby / circulation					
	Structure / Partitio					
	Mechanical Room					
	Electrical Room					
	Comm.Room					
	DINING FACILITY TOTAL			759.00		

				PROGRAM	
Rm. No.	ROOM / AREA NAME			NET SM	
	FLEET RECREATION (LIBE	RTY (CENTER)		
	Theater			66.00	
	Internet Area			55.00	
	Laundry			103.00	
	Rental Lockers			76.00	
	Billiards / Ping Pong			54.00	
	Video Games			14.00	
	Snack Area			7.00	
	Seating / Dancing Area			85.00	
	Equipment Check Out			6.00	
	ITT Office			10.00	
	MWR Office			10.00	
	Public Toilets - Male			20.50	
	Public Toilets - Female			20.50	
	Public Telephones			17.00	
	Spaces Net to Gross			218.00	
	Lobby / circulation	on			
	Structure / Partit	ions			
	Mechanical Roo	m			
	Electrical Room				
	Comm.Room				
	FLEET RECREATION TOTAL	\L		762.00	
	BUILDING M TOTAL - (GSM		3577.00	

		PROGRAM	
Rm. No.	ROOM / AREA NAME	NET SM	
	BUILDING W		
	DOILDING W		
	PORT SERVICES OPERATIONS FUN	CTION	
	Oil Boom Maintenance Shop	49.00	
	Paint Shop	28.00	
	Paint Locker	14.00	
	Boat Maintenance Bay	140.00	
	HAZMAT Storage Locker	7.00	
	Engine Shop	28.00	
	Small Engine Shop	28.00	
	Injector Shop	14.00	
	Battery Locker	28.00	
	Electrical Shop	6.00	
	Sand Blasting Room	23.00	
	Rigger's Loft	19.00	
	Deck Equipment Maintenance Shop	19.00	
	Technical Library	19.00	
	Toilets - Male	16.00	
	Toilets - Female	12.00	
	Vending Area	9.00	
	Electrical Tool Issue	17.00	
	Weld and Machine Shop	39.00	
	PSBO Bunk Room	9.00	
	Oil Spill Truck and Forklift Garage	70.00	
	Supply Storage and Issue	81.00	
	IS Computer Repair Shop	14.00	
	IS Service Center	23.00	
	Chemical Analysis Lab	14.00	
	Bio Lab	14.00	
	Training Room	90.00	
	Gear Storage Locker	20.00	
	Spaces Net to Gross	340.00	
	Lobby / circulation	340.00	
	Structure / Partitions		
	Mechanical Room		
	Electrical Room		
	Comm.Room		
		1400 00	
	PORT SERVICES OPER TOTAL	1190.00	

		PROGRAM	
Rm. No.	ROOM / AREA NAME	NET SM	
		Na van	
	PORT SERVICES ADMINISTRATION	NARFAS	
	TOTAL GENERAL SERVICE		
	Operations Office	48.00	
	Engineer Office	36.00	
	Yeoman Office	27.00	
	LAN Server and CCTV Room	13.00	
	Asst. Port Services Officer	22.00	
		9.00	
	Port Services - Receptionist Port Services - LCPO Office	12.00	
	Port Services Officer	15.00	
	Dark Comings Tabel	100.00	
	Port Services - Total	182.00	
	Public Works		
	Open Office	70.00	
	Public Works - Total	70.00	
	Environmental		
	Office	9.00	
	Environmental - Total	9.00	
	Squadron		
	Commodore's Cabin	17.00	
	Commodore's Change Room	9.00	
	Chief Staff Office	10.00	
	Chief Staff Change Room	7.00	
	Receptionist	9.00	
	Admin. Office	9.00	
	Command Master Chief	12.00	
	Staff Office	23.00	
	Staff Office	21.00	
	Staff Office	17.00	
	Staff Office	9.00	
	Staff Office	9.00	
	Start Office		
	Squadron - Total	152.00	
	Squadion - Total	132.00	
	Conformed		
	Conference Room	20.00	
	Conference Room	30.00	
	Conference Room - Total	30.00	

		PROGRAM	
Rm. No.	ROOM / AREA NAME	NET SM	
	Building Support Functions		
	Spaces Net to Gross	266.00	
	Lobby / circulation		
	Structure / Partitions		
	Mechanical Room		
	Electrical Room		
	Comm.Room		
	Conference Room - Total	266.00	
	PORT SERVICES ADMIN - TOTAL	709.00	
	SUPPORT ON CALL STAFF FUNCTION		
	CPO and Officer Lounge	9.00	
	Locker Room - Male	65.00	
	Locker Room - Female	7.00	
	Toilets - Male	29.00	
	Toilets - Female	8.00	
	Shower Room - Male	24.00	
	Shower Room - Female	6.00	
	CPO and Officer's Locker Room - Male	7.00	
	CPO and Officer's Locker Room - Female	6.00	
	CPO and Officer's Toilet Room - Male	8.00	
	CPO and Officer's Toilet Room - Female	8.00	
	CPO and Officer's Shower Room - Male	6.00	
	CPO and Officer's Shower Room - Female		
	Medical Office	26.00	
	Medical Toilet	5.00	
	Medical Ward	5.00	
	Medical Exam Room	10.00	
	Telephone Exchange Room	5.00	
	Bunk Room - Male	204.00	
	Bunk Room - Female	102.00	
	Kitchen / Snack Area	10.00	
	Television Room	33.00	
	Spaces Net to Gross	236.00	
	Lobby / circulation		
,	Structure / Partitions		
	Mechanical Room		
	Electrical Room		
	Comm.Room		
	33		
	SUPPORT STAFF FUNCTION - TOTAL	825.00	

			PROGRAM	
Rm. No.	ROOM / AREA NAME		NET SM	
	SECURITY OPERATIONS			
	Reception Space		9.00	
	Interview Room		9.00	
	Manning Post		19.00	
	Secure Storage		9.00	
	Operations Room		19.00	
	Equipment Room		28.00	
	Spaces Net to Gross		56.00	
	Lobby / circula	tion		
	Structure / Par			
	Mechanical Ro			
	Electrical Roor			
	Comm.Room	··		
	00.1111.1100111			
	SECURITY OPERATIONS	- TOTAL	149.00	
	SEGGINTI OF EFFATIONS	IJIAL	1.0.00	
	BOSC CONTRACTOR			
	BOSC CONTRACTOR			
	Office		54.00	
-			70.00	
	Storage Area Toilet - Female		5.00	
		lala	60.00	
	Locker / Toilet / Shower - M	aie	25.00	
	Kitchenette / Lunch Room		128.00	
	Spaces Net to Gross	Vian	120.00	
	Lobby / circula			
	Structure / Par			
	Mechanical Ro			
	Electrical Roor	m		
	Comm.Room			
			1 2000	
	BOSC CONTRACTOR - TO	DTAL	342.00	
	GENERAL WAREHOUSE			
	Office		54.00	
	Locker / Toilet / Shower - U	nisex	15.00	
	Build Up / Break Down		36.00	
	Pallet Rack Storage		609.00	
	Spaces Net to Gross		143.00	
	Lobby / circula			
	Structure / Par			
	Mechanical Ro			
	Electrical Room	m		
	Comm.Room			
	GENERAL WAREHOUSE	- TOTAL	857.00	
			Page 8	

HAZ HaZ HaZ CHF Gas HaZ Oxid Flam Corr Spad	Waste Processing Waste Empty Drum Storage IMP Farm Waste Storage izers mables osives ces Net to Gross Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room IMAT STORAGE - TOTAL LDING W TOTAL - GSM	PROGRAM NET SM S6.00 41.00 68.00 81.00 64.00 10.00 32.00 16.00 74.00 442.00 4514.00	
HAZ HaZ HaZ CHF Gas HaZ Oxid Flam Corr Spad	Waste Processing Waste Empty Drum Storage IMP Farm Waste Storage izers imables osives ces Net to Gross Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	56.00 41.00 68.00 81.00 64.00 10.00 32.00 16.00 74.00	
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CHF Gas Haz Oxid Flam Corr Spad HAZ BUI Berti	RIMP Farm Waste Storage izers imables osives ces Net to Gross Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	68.00 81.00 64.00 10.00 32.00 16.00 74.00	
Gas Haz Oxid Flam Corr Spad HAZ BUI Bui	Waste Storage izers imables osives ces Net to Gross Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	81.00 64.00 10.00 32.00 16.00 74.00	
Haz Oxid Flam Corr Spad HAZ BUI Bui	Waste Storage lizers mables osives ces Net to Gross Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	64.00 10.00 32.00 16.00 74.00	
HAZ BUI SM.	izers imables osives ces Net to Gross Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	10.00 32.00 16.00 74.00	
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HAZ BUI SM.	Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	74.00 442.00	
BUI SM.	Lobby / circulation Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM	442.00	
SM. Berti	Structure / Partitions Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM		
SM. Berti	Mechanical Room Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM		
SM. Berti	Electrical Room Comm.Room MAT STORAGE - TOTAL LDING W TOTAL - GSM		
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Nesco International Srl via Conca d'Oro,300°

Roma, february 5,03

S.Stefano - NSA, La Maddalena

P-995 WATERFRONT RECAPITALIZATION, Soils Investigation

Preliminary Report

1.0 Premise

The following is the preliminary report, describing the soils scenario verified through a no-destructive investigation (seismic survey) carried out at the ref. site during the week – january 20/24,03.

The investigation has been addressed to evaluate the soils conditions on the area occupied by old facilities, that will be substituted by new Buildings (from south to north: Fitness Center, Bachelor Quarters, Dining Fac., CEB, Port Services, General Storage and Hazardous Materials Storage).

The processing of field seismic data are at present in progress and the findings will make part of the Final Report, as well as the results of the mechanical tests on rock samples recovered in S.Stefano. Hence, this paper is finalized to:

- provide informations on the feasibility of the excavation works necessary to obtain the area destined to new facilities;
- indicate the foundations type for the new related structures.

2.0 Geology/morphology

S.Stefano island is part of the cristalline igneous rocks (granite,granodiorite), forming the regional batolite intruded during the Hercinic orogenesis of the medium-upper Carboniferous Period.

The massive rock, pink in color, coarse-grained structured, contains the classic distribution of feldspars, quartz and micas minerals, more or less oxidized and weathered near the surface.

The general landscape features of the substantially rounded outcrops have been modified and reshaped in the past by large excavations works to level off the site (cuts at west side and fill/rock-fill facing the sea) to accommodate the existing facilities.

3.0 Site pavement

The payement all over the site is generally constituted by a 10-15 cm concrete

slab, reinforced with a welded wire mesh, overlaying an old bituminous paving. Many patches have been carried out in the past.

4.0 Excavations

From informations provided to us by A/E, the line of the new Facilities will be slightly moved in such a way that the "uphill" external side maintains a distance of 4-5 m from the existing fence.

A large excavation on the southern border is foreseen, to accommodate the Fitness Center, into the granite outcrop, that slopes ($i=30-35^{\circ}$) from el. ~ 3.5 m up to el. ~ 17 m on the sea level.

The rock is not rippable and jack-hammer/back-hoe operations will be necessary, taking advantage of the joints and discontinuities (created by the weathering agents), characterizing the hard rock mass. No problem regarding general stability would occur.

5.0 Foundations

Foundations of all buildings shall be of the shallow type, the bottom established within 1.0-1.5 m from the existing g.s., both on weathered rock and /or fill/rock-fill.

Studio Indagini Geotecniche Snc

(Dr. Bruno Cutruzzulà)



January 17, 2003

Mr. Charles A. Hutchinson Rogers, Lovelock & Fritz, Inc. 145 Lincoln Avenue Winter Park, Florida 32790-0730

Subject:

Final Report of Asbestos, PCB, Mercury Survey

and Lead Based Paint Screening

Project P-995

Waterfront Recapitalization

La Maddelena, Italy

MACTEC Project 40280-2-2009/**/606

Dear Mr. Hutchinson:

MACTEC Engineering and Consulting, Inc. f/k/a Law Engineering and Environmental Services, Inc. (MACTEC) is pleased to present to Rogers, Lovelock & Fritz, Inc. (RLF) this report of our consulting services for the P-995 buildings included in the renovation and demolition project at the Waterfront Recapitalization in La Maddelena, Italy. This report includes a background, findings of our survey and screening, recommendations and supporting documentation.

We appreciate the opportunity to provide our consulting services on this project. If you have any questions or require additional information or services, please contact us.

Sincerely,

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC. f/k/a LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

P-005-0

Paul D. Santone Project Professional Brian J. DuChene Principal Engineer

G:\groups\asbestos\projects\40280-2-2009\2009 rpt.doc

EXECUTIVE SUMMARY

Under a contract agreement between Rogers, Lovelock & Fritz, Inc. (RLF) and MACTEC Engineering and Consulting, Inc. f/k/a Law Engineering and Environmental Services Inc (MACTEC), RLF retained MACTEC to perform an evaluation for asbestos-containing materials (ACM), Polychlorinated Biphenyl (PCB) bearing oils, Mercury, and a screening for lead based paint at specified buildings affected by the planned P-995 renovation and demolition project at the Waterfront Recapitalization in La Maddelena, Italy.

The field services were performed on October 21 to 25, 2002. The following is a summary of findings for each building.

Building 2 (Sneakers)

A total of 8 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Identified category I non-friable, asbestos-containing materials include the original built-up roof system on the front entrance roof. No friable asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include soffit, doorframes, steel canopy and structural steel.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 3 (Italian Barracks)

A total of 15 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Identified category II non-friable, asbestos-containing materials include corrugated cementitious roof flue pipe, corrugated panels and support column. No friable asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include handrail, window shutters,

exterior doors, doors, downspouts, exterior structure steel, window screen, exterior door frames, flag pole, heat pipes, vault door, radiator, interior door frames, fencing, and interior wall.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 4 (Gymnasium)

A total of 16 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Identified category II non-friable, asbestos-containing materials include corrugated cementitious roof panels. No friable asbestos-containing materials were identified within the facility.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include window frames, walls, doors, doorframes, sewage line, structural steel and stairs.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 9

A total of 2 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. No asbestos-containing materials were identified within this building.

No painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight.

Mercury vapor bulbs were identified within the facility. No PCB ballast were identified within this building.

Building 12 (NWR)

A total of 6 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. No asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include doorframes, threshold, parking curb, canopy support and exterior walls.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 13 (Transit Shed)

A total of 8 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Asbestos-containing category I materials were identified include black mastic under second layer of floor tile. No friable asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include floor, structural steel, framing, doors, interior exterior walls and soffit.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 14 (Classroom)

A total of 11 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Asbestos-containing category I non-friable materials were identified within the floor tile/mastic. No friable asbestos-containing material was identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include interior and exterior walls, doors, soffit, and doorframes.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 17 (Waiting Room)

A total of 4 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. No asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include handrail.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 18 (Storage)

A total of 5 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Identified Category II non-friable asbestos-containing materials include cementitious roof panels. No friable asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include doors and doorframes.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 19 (Security Guard Shed)

A total of 2 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. No asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include doorframes, and interior walls.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 20 (Public Works)

A total of 2 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. No asbestos-containing materials were identified within this building.

No painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight.

Mercury vapor bulbs were identified within the facility. No suspect ballast were identified within this building.

Building 22 (Public Works Site Crew)

A total of 4 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. No asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include exterior stairs and walls.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

Building 104 (BEQ)

A total of 10 homogenous areas of suspect asbestos-containing materials were observed and sampled within the facility. Identified category II non-friable asbestos-containing materials include cementitious flue pipe within the facility. No friable asbestos-containing materials were identified within this building.

Painted components within the interior and the exterior of the facility were identified to contain lead concentrations greater than 0.06% by weight. Typical components include doorframes, structural steel, handrail, stairs, soffit, downspout and bollard.

Suspect PCB ballast or mercury vapor bulbs were identified within this building.

The following is a table of asbestos containing materials, quantities and removal costs:

P-995 – LA MADDALENA, ITALY MATERIAL, QUANTITY AND OPINION OF COST ESTIMATE					
Building	Material	Quantity	Removal Cost		
Description	(ACM)				
3	Cementitious Flue Pipe	200 s.f.	\$3,000.00		
3	Corrugated Cementitious Roof Panels	2,617 s.f.	\$39,255.00		
4	Corrugated Cementitious Roof Panels	100 s.f.	\$1,500.00		
13	Mastic Associated With Non-Asbestos	150 s.f.	\$525.00		
	Ref Floor Tile (Second Layer)				
14 12"x12" Beige Floor Tile and Mastic		3,116 s.f.	\$10,906.00		
18	Cementitious Corrugated Panel	40 s.f.	\$600.00		
104 Cementitious Flue		120 s.f.	\$1,800.00		
2 ACM Roofing		1,090 s.f.	\$5,450.00		
TOTAL			\$103,036.00		

Notes:

- Cost does not include design specification, project monitoring and final clearance.
- No unit rate provided for non-transite, bituminous ACM roofing. Rate for transite was used for this item.
- All identified interior and exterior asbestos containing materials.
- Any additional Italian regulatory guidelines for the removal and disposal of hazardous materials over and above NESHAPS and OSHA regulations.

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APPENDIX B PERSONNEL CERTIFICATIONS

1.0 PROJECT INFORMATION

Under a contract agreement between Rogers, Lovelock & Fritz, Inc. (RLF) and MACTEC Engineering and Consulting, Inc. f/k/a Law Engineering and Environmental Services, Inc (MACTEC), RLF retained MACTEC to perform an evaluation for asbestos-containing materials (ACM), Polychlorinated Biphenyl (PCB) bearing oil, Mercury, and a screening for lead based paint at specified buildings affected by the planned P-995 renovation and demolition project at the Waterfront Recapitalization in La Maddelena, Italy.

The scope of work for the project was based upon the Scope Of Work For Performing Asbestos, Lead, PCBs and Mercury screenings for Demolition and Renovation Designs provided by RLF and in accordance with MACTEC's Proposal PA-40299-2-0000/1640 Revision 1 dated August 2, 2002.

MACTEC's services for the project were as follows:

- Review existing documents available for the buildings including previous asbestos and lead based paint surveys, sampling, and abatement activities.
- Obtain representative samples of suspect asbestos-containing materials for analysis by Polarized Light Microscopy.
- Conduct a limited lead based paint screening to locate and identify the approximate extents of paints containing lead within each facility.
- Provide recommendations for the hazardous materials abatement portion of the project.

The following P-995 buildings are addressed in this report:

- Building 2
- Building 3
- Building 4
- Building 9
- Building 12
- Building 13
- Building 14
- Building 17
- Building 18
- Building 19
- Building 20
- Building 22
- Building 104

2.0 ASBESTOS SURVEY

2.1 INTRODUCTION

This report section addresses the asbestos survey performed at the La Maddelena, Italy Station. In this section, we provide the purpose, scope, and tasks for this survey, and summaries the identified asbestos-containing materials. In Appendix A, we present the following methodologies:

- Standard field and laboratory procedures
- Bulk sampling and assessment procedures
- Assessment procedures
- Conclusions and recommendations for further action

2.2 PURPOSE AND SCOPE

The purpose of this survey was to provide approximate quantities, locations, and the types of ACM present within the various facilities. These findings have been used to develop recommendations for abatement or in-place management of the ACM.

The scope of the asbestos survey for each building included the observation of accessible interior and exterior building components of each building for suspected ACM. The suspect materials observed were categorized by type, homogeneous area, general condition, and friability. A homogeneous area contains material that is uniform in texture and appearance, was installed at one time, and is unlikely to consist of more than one type, or formulation, of material. The United States Environmental Protection Agency (EPA) has defined as "friable" those materials that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Samplings of homogeneous areas of suspect materials were taken in accordance with current EPA bulk sampling guidelines. This protocol has been found to reduce the likelihood of "false negative" analyses. The samples were analyzed in accordance with Asbestos Hazard Emergency Response Act (AHERA) "first positive analysis" protocol recommended by the EPA.

2.3 SURVEY TASKS

The following tasks were performed as part of this asbestos survey:

- 1. A visual survey was performed to identify homogeneous areas of suspect ACM and to assess their condition, friability, potential for damage/disturbance and their potential to expose occupants and visitors of the facility to asbestos fibers.
- 2. Review and provide a summary documenting previous abatement and asbestos activities to assess existing condition of ACM.
- 3. Samples of accessible suspect materials were collected and analyzed at MACTEC's laboratory following USEPA-recommended procedures. The quantities of sampled and assumed ACM were estimated.
- 4. Report our findings and present recommendations for further actions, if warranted.

Shawn E. Brigham, Paul D. Santone, and Robert Frasard of MACTEC performed the surveys on October 21 to 25, 2002. MACTEC utilized accredited asbestos inspectors and management planners in accordance with the EPA Model Accreditation Program (MAP) requirements.

The bulk sample analyses were performed by EMSL's asbestos laboratory located in Westmont, New Jersey. The laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP No. 101048-0) to analyze samples of suspect asbestos-containing material using polarized light microscopy. The bulk sample analysis was performed in accordance with EPA Method 600/R-93/116.

3.0 HEAVY METAL CONTAMINATED COATING SCREENING

3.1 INTRODUCTION

This section of the report describes the paint chip survey performed at the various buildings. In this section, we present:

- Paint Screening Procedure and Results
- Conclusions and Recommendations

3.2 PAINT SCREENING PROCEDURES AND RESULTS

The survey included bulk sampling of coatings on the interior and exterior surfaces of each facility. A walk-through was performed to determine the location and approximate extent of the various homogenous painted surfaces. Representative bulk paint chip samples were collected from the various homogenous paint areas. The services were performed by Mr. Shawn E. Brigham, who has successfully completed an EPA approved lead inspector and risk assessor training course.

Samples of paint, down to the substrate, were obtained by scraping and sent to EMSL Analytical, Inc. in Westmont, New Jersey, an American Industrial Hygiene Association ELPAT accredited laboratory (Lab No. 04653), for analysis by Flame Atomic Absorption using EPA SW-846-7420 or AOAC 5.009 (974.02).

3.3 CONCLUSIONS AND RECOMMENDATIONS

The following recommendations are based upon the test data obtained in this survey. If conditions are discovered during renovations that deviate from that data presented in this report, please contact us so that these conditions can be evaluated.

3.3.1 Lead Based Paint

Currently, there are no regulations that require the removal of lead-based paint which apply to these buildings. However, when these coatings are disturbed (scraping and sanding, etc.), the resulting airborne dust concentrations may exceed the Occupational Safety and Health Administration (OSHA) permissible exposure limits for lead. The OSHA regulations require that exposures to construction workers and

general industry personnel be controlled by proper work procedures. Any abatement action should utilize the proper engineering controls and comply with the OSHA Construction Standards for Lead (29 CFR 1926.62).

4.0 PCB AND MERCURY SCREENING

4.1 INTRODUCTION

This report section addresses the polychlorinated biphenyls (PCB) and mercury screening performed within the various facilities. In this section, we provide the purpose, scope, and tasks for this screening, conclusions, and recommendations:

- Standard field procedures
- Conclusions and recommendations for further action

4.2 PURPOSE AND SCOPE

The scope of the PCB screening for each building was to survey the existing lighting ballasts for the presence of PCB bearing oils. Since no manufacturer's documentation was made available to the inspector, typical ballasts were inspected for a "non-PCB" label. If a "non-PCB" label is not present on the ballast, it must be assumed to contain PCB's. However, newer non-PCB "electronic" ballast were observed and base personnel indicated this type ballast does not contain PCB oil in accordance with current replacement requirements by the Navy. The mercury screening scope was to identify fluorescent and High Intensity Discharge (HID) lighting lamps that will be removed as part of the building renovation or demolition.

4.3 CONCLUSIONS AND RECOMENDATIONS

The predominant lighting within the buildings is fluorescent lighting. The fluorescent lamps have been assumed to contain mercury vapor and the ballasts to contain PCB's since "no PCB" labels were not observed on representative units throughout several of the buildings. Lamps containing mercury vapor and ballasts containing PCBs would require disposal or recycling as hazardous waste and PCB containing material, respectively. Spent mercury-containing lamps and devices are typically regulated by under federal regulations in 40 CFR Part 273, the Standards for Universal Waste Treatment. Spent ballasts containing PCBs are regulated under 40 CFR Part 61.

We recommend the evaluation of options for the removal and disposition of mercury-containing lamps and devices and ballasts that potentially contain PCBs. Potential options may include, for example, removal by a contractor as part of demolition, or removal by base personnel staff before demolition. Additionally, the

specific regulatory requirements and proper procedures for management of potentially hazardous materials that will be removed for disposal should be evaluated. Appropriate work specifications should be developed.

4.4 ROUGH ORDER OF MAGNITUDE OPINION OF ASBESTOS REMOVAL COSTS

MACTEC has prepared a preliminary cost estimate for the removal and disposal of asbestos containing materials, disposal of lead based paint and disposal of mercury light bulbs and PCB containing oils and light ballasts.

The referenced table reflects the following information:

- All identified interior and exterior asbestos containing materials;
- Allowance for identified lead based paint, mercury light bulbs and PCB containing oils and light bulbs;
- Any additional Italian regulatory guidelines for the removal and disposal of hazardous materials over and above NESHAPS and OSHA regulations.

The following is a table of materials, quantities and cost estimate:

P-995 – LA MADDALENA, ITALY MATERIAL, QUANTITY AND OPINION OF COST ESTIMATE						
, and the state of the control of th						
Building Description	Material (ACM)	Quantity	Removal Cost			
3	Cementitious Flue Pipe	200 s.f.	\$3,000.00			
3	Corrugated Cementitious Roof Panels	2,617 s.f.	\$39,255.00			
4	Corrugated Cementitious Roof Panels	100 s.f.	\$1,500.00			
13	Mastic Associated With Non-Asbestos	150 s.f.	\$525.00			
	Ref Floor Tile (Second Layer)					
14	12"x12" Beige Floor Tile and Mastic	3,116 s.f.	\$10,906.00			
18	Cementitious Corrugated Panel	40 s.f.	\$600.00			
104 Cementitious Flue		120 s.f.	\$1,800.00			
2	ACM Roofing	1,090 s.f.	\$5,450.00			
Throughout	Lead Based Paint Allowance	N/A	\$20,000.00			
Throughout	Mercury Light Bulbs and PCB					
	Containing Oils and Light Bulbs	N/A	. \$20,000.00			
TOTAL			\$143,036.00			

Notes:

- Cost does not include design specification, project monitoring and final clearance.
- No unit rate provided for non-transite, bituminous ACM roofing. Rate for transite was used for this item.

4.5 QUALIFICATIONS

MACTEC has endeavored to observe the existing conditions within the building using generally accepted procedures. Regardless of the thoroughness of our testing, there is always a possibility some areas containing lead based paint and asbestos-containing materials were overlooked or inaccessible, or are different from those specific test locations.



Green Building Rating System

Version 2.1



RLF

Rogers, Lovelock & Fritz, Inc. 145 Lincoln Avenue

Winter Park, FL 32790-0730 Phone No. (407) 647-1039

PROJECT: La Maddalena

Sardinia, Italy JOB NO.: 2040.00 ENGINEER: DWB

DATE: 20-Feb-2003

LEED Green Building Rating System - Version 2.1

Y	?	N.	CREDIT		Credit Category	Credit Title
					Suctainable Sites	(88)
NA	П			0	Sustainable Sites SS Prerequisite 1	Erosion and Sedimentation Control
				•	CC Credit 1	O'ly O de attac
	Ш	N		<u> </u>	SS Credit 1	Site Selection
		N		1	SS Credit 2	Development Density
		N		1	SS Credit 3	Brownfield Redevelopment
				1	SS Credit 4.1	Alternative Transportation, Public Transportation Access
				1	SS Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms
		N		1	SS Credit 4.3	Alternative Transportation, Alternative Fuel Vehicles
		N		1	SS Credit 4.4	Alternative Transportation, Parking Capacity
		N		1	SS Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space
		N		1	SS Credit 5.2	Reduced Site Disturbance, Development Footprint
		N		1	SS Credit 6.1	Stormwater Management, Rate and Quantity
		N		1	SS Credit 6.2	Stormwater Management, Treatment
		N		1	SS Credit 7.1	Heat Island Effect: Non-Roof
2 4				1	SS Credit 7.2	Heat Island Effect: Roof
		N		11	SS Credit 8	Light Pollution Reduction
			3	14	SS SubTotal	

RLF

Rogers, Lovelock & Fritz, Inc.

145 Lincoln Avenue Winter Park, FL 32790-0730 Phone No. (407) 647-1039

PROJECT: La Maddalena

Sardinia, Italy
JOB NO.: 2040.00
ENGINEER: DWB

DATE: 20-Feb-2003

		_			m - Version 2.1	Credit Title
	?	N	CREDIT	POSSIBLE	Credit Category	Credit Title
BY (4)				1	Water Efficiency (WE Credit 1.1	WE) Water Efficient Landscaping, Reduce by 50%
				· · · · · · · · · · · · · · · · · · ·		
	_ <u></u> _			1	WE Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation
				1	WE Credit 2	Innovative Wastewater Technologies
M				1	WE Credit 3.1	Water Use Reduction, 20% Reduction
	?		4	<u>1</u> 5	WE Credit 3.2 WE SubTotal	Water Use Reduction, 30% Reduction
			4	5		
Y		П		0	Energy and Atmos EA Prerequisite 1	sphere (EA) Fundamental Building Systems Commissioning
Y				0	EA Prerequisite 2	Minimum Energy Performance
M			•	0	EA Prerequisite 3	CFC Reduction in HVAC&R Equipment
M				1	EA Credit 1.1	Optimize Energy Performance, 15% New 5% Existing
		N		1	EA Credit 1.2	Optimize Energy Performance, 20% New 10% Existing
		N		1	EA Credit 1.3	Optimize Energy Performance, 25% New 15% Existing
		N		1	EA Credit 1.4	Optimize Energy Performance, 30% New 20% Existing
		N		1	EA Credit 1.5	Optimize Energy Performance, 35% New 25% Existing
		N		1	EA Credit 1.6	Optimize Energy Performance, 40% New 30% Existing
		N		1	EA Credit 1.7	Optimize Energy Performance, 45% New 35% Existing
		N		1	EA Credit 1.8	Optimize Energy Performance, 50% New 40% Existing
		N		1	EA Credit 1.9	Optimize Energy Performance, 55% New 45% Existing
		N		1	EA Credit 1.10	Optimize Energy Performance, 60% New 50% Existing
		N		1	EA Credit 2.1	Renewable Energy, 5%
		Ν		1	EA Credit 2.2	Renewable Energy, 10%
		N		1	EA Credit 2.3	Renewable Energy, 20%
	:			1	EA Credit 3	Additional Commissioning
Ma				1	EA Credit 4	Ozone Protection
				1	EA Credit 5	Measurement and Verification
		N	3	1 17	EA Credit 6 EA SubTotal	Green Power
			J	17	LA JUDIOIAI	

RLF

Rogers, Lovelock & Fritz, Inc.

145 Lincoln Avenue

Winter Park, FL 32790-0730 Phone No. (407) 647-1039 PROJECT: La Maddalena

Sardinia, Italy

JOB NO.: 2040.00 ENGINEER: DWB

DATE: 20-Feb-2003

LEED Green Building Rating System - Version 2.1

Y.	?	Ν	CREDIT	POSSIBLE	Credit Category	Credit Title		
Materials and Resources (MR)								
11/6				0	MR Prerequisite 1	Storage & Collection of Recyclables		
		N		1	MR Credit 1.1	Building Reuse, Maintain 75% of Existing Shell		
		N.		1	MR Credit 1.2	Building Reuse, Maintain 100% of Existing Shell		
		N		1	MR Credit 1.3	Building Reuse, Maintain 100% Shell & 50% Non-Shell		
		N		1	MR Credit 2.1	Construction Waste Management, Divert 50% from Landfill		
		N		1	MR Credit 2.2	Construction Waste Management, Divert 75% from Landfill		
	24			1	MR Credit 3.1	Resource Reuse, Specify 5%		
	1			1	MR Credit 3.2	Resource Reuse, Specify 10%		
		N		1	MR Credit 4.1	1/2 Post-Industrial		
		N		1	MR Credit 4.2	1/2 Post-Industrial		
				1	MR Credit 5.1	Regional Materials, 20% Manufactured Regionally		
NI				1	MR Credit 5.2	Regional Materials, 50% Extracted Regionally		
				1	MR Credit 6	Rapidly Renewable Materials		
				1	MR Credit 7	Certified Wood		
			4	13	MR SubTotal			

RLF

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Phone No. (407) 647-1039

PROJECT: La Maddalena

Sardinia, Italy

JOB NO.: 2040.00 ENGINEER: DWB

DATE: 20-Feb-2003

LEED Green Building Rating System - Version 2.1

Y	?	N	CREDIT	POSSIBLE	Credit Category	Credit Title
					Indoor Environme	ntal Quality (EQ)
DO				0	EQ Prerequisite 1	Minimum IAQ Performance
P.				0	EQ Prerequisite 2	Environmental Tobacco Smoke (ETS) Control
				1	EQ Credit 1	Carbon Dioxide (CO2) Monitoring
D'A				1	EQ Credit 2	Ventilation Effectiveness
B'A				1	EQ Credit 3.1	Construction IAQ Management Plan, During Construction
	7			1	EQ Credit 3.2	Construction IAQ Management Plan, Before Occupancy
				1	EQ Credit 4.1	Low-Emitting Materials, Adhesives and Sealants
				1	EQ Credit 4.2	Low-Emitting Materials, Paints and Coatings
				1	EQ Credit 4.3	Low-Emitting Materials, Carpet
P.4				1	EQ Credit 4.4	Low-Emitting Materials, Composite Wood
				1	EQ Credit 5	Indoor Chemical and Pollutant Source Control
	?			1	EQ Credit 6.1	Controllability of Systems, Perimeter Spaces
P.4				1	EQ Credit 6.2	Controllability of Systems, Non-perimeter Spaces
				1	EQ Credit 7.1	Thermal Comfort, Compliance with ASHRAE 55-1992
				1	EQ Credit 7.2	Thermal Comfort, Permanent Monitoring System
				1	EQ Credit 8.1	Daylight and Views, Daylight 75% of Spaces
	1			1	EQ Credit 8.2	Daylight and Views, Views for 90% of Spaces
			12	15	EQ SubTotal	

RLF				PROJECT	: La Maddalena
Rogers, Lovelo		ritz, Inc.			
145 Lincoln Ave		00 0700		JOB NO. ENGINEER	: 2040.00
Winter Park, Fl Phone No. (40					:: DWB :: 20-Feb-2003
1 110116 140. (40	,, 041	-1003		DATE	20-1 65-2000
LEED Gree	n Buil	ding Ra	ting Syste	m - Version 2.1	
?	N	CREDIT	POSSIBLE	Credit Category	Credit Title
				Innovation & Desi	an Process (ID)
			1	ID Credit 1.1	Innovation in Design, TBD
			1	ID Credit 1.2	Innovation in Design, TBD
				ID 0 - 44 4 0	
	Ш		1	ID Credit 1.3	Innovation in Design, TBD
			1	ID Credit 1.4	Innovation in Design, TBD
	Ν		1	ID Credit 2.1	LEED™ Accredited Professional
		0	5	ID Subtotal	
		26	69	TOTAL POINTS	POSSIBLE
LEED GREEN BUILDING CERTIFICATION LEVELS					LEVELS
	= 26	6 - 32	LEED CE	RTIFIED	
	= 33	3 - 38	LEED CE	RTIFIED SILVER	LEVEL
	= 39	9 - 51	LEED CE	ERTIFIED GOLD L	EVEL
	= 52	2 +	LEED CE	RTIFIED PLATIN	UM LEVEL

ROCK REMOVAL

P-995 Waterfront Recapitalization

LaMaddalena, Italy

16 Feb 2003

EXISTING CONDITIONS / DESIGN INTENTIONS:

- 1. Rock previously removed to prepare existing site for use
- 2. Minimal additional rock removal proposed at base of slope
- 3. Proposed rock removal occurs only within perimeter fence
- 4. Will not remove major rock outcropping at west end that is visible from seaside
- 5. Area of proposed rock removal not visible from park side or seaside
- 6. Area of proposed rock removal concealed behind proposed buildings

BENEFITS OF ADDITIONAL ROCK REMOVAL:

- 1. Removes damaged rock and concrete covered rock
- 2. Cleans abandoned steel posts anchors and debris from rock
- 3. Protects natural appearance while cutting rock
- 4. Improves buildable area on a limited site
- 5. Simplifies structural design
- 6. Increases open staging area between buildings and waters edge
- 7. Improves natural light to rear of building
- 8. Improves storm water drainage and collection at rear of buildings
- 9. Reduces moisture problems in building walls and interiors
- 10. Improves access to rear of buildings for fire protection
- 11. Improves access to rear of buildings for surveillance and security
- 12. Improves access to rear of buildings for safety
- 13. Improves access to rear of buildings for service and maintenance
- 14. Improves Anti-terrorism / force protection

SECTION 5 - FACD PROCESS

INTRODUCTION

A Function Analysis Concept Development (FACD) was conducted on the design of MCON FY04 Project P-995 Consolidate Santo Stefano Facilities (alternatively known as Waterfront Recapitalization Project, Santo Stefano, Sardinia, Italy for the Atlantic Division (LANTDIV) of the Naval Facilities Engineering Command. The project is being designed by Rogers, Lovelock & Fritz (RLF) and LANTDIV's Engineering and Design Division of Norfolk, Virginia.

The primary FACD team included personnel from RLF, NESCO (Italian Consultant), C. Allan Bamforth Engineers and Surveyors (Civil Designers), Foodesign Associates, Allan & Conrad (Strurctural Designers), LANTDIV design and project management, NSA LaMaddalena, NAVEUR London, COMSUBRON 22, USS E.S. LAND, PSC 816 (Port Services), EFAMED, NCIS, MWR Millington, Base Public Works and the facilitators from Lewis & Zimmerman Associates, Inc. The FACD was conducted 10 – 20 February 2003 at the Villa del Parco Hotel in LaMaddalena, Sardinia.

THE FACD PROCESS

The goal of the workshop was to develop a project that could be constructed within budget, within the prescribed usable area, and meet the users' functional needs. The basic Function Analysis Concept Development approach uses function analysis techniques and the value engineering (VE) Job Plan to bring the owners and users into the design process and incorporate their needs into a concept design that can progress to the 35% design stage and meet the above-stated goals.

The FACD was kicked-off 10 February 2003 and followed the agenda (see the enclosed *FACD Workshop Agenda*). At the start of the workshop, the design team presented a preliminary concept design that had been developed in the weeks preceding the workshop. Within the FACD process, this initial presentation becomes Concept 1 and is the starting point for the analysis of end user functions and creative discussions.

During the function analysis, the participants at the kickoff meeting / Concept 1 presentation were asked to identify key functions to be accomplished by the project. These functions are summarized on the enclosed *Random Function Analysis* worksheets. This exercise focused the team on the essential objectives of the project and helped them make decisions necessary to bring the project into cost and spatial budgets. The function analysis was revisited and expanded on as necessary throughout the workshop.

Following the function analysis, the facilitator leads the participants through a session to generate a list of project concerns and ideas to improve the project in terms of the established functions and budget, total life-cycle cost, and sustainable design. The team then evaluates these ideas as to whether they are generally acceptable and to be incorporated into the design, rejected, or needing further action. The enclosed *Disposition of Issues* worksheet identifies the more important

difficulties encountered in this workshop and provides insight into how each of these issues was handled.

Also enclosed for each concept are the forms reflecting the comments made by the end-users and other stakeholders. It was somewhat unusual in this workshop that most of the comments from the participants came in the one-on-one work sessions in which the design team reviewed the design with the participants and made corrections and modifications to better respond to their comments. Almost all of the comments are contained in the *Meeting Minutes/Phone Conversation Records that are enclosed*.

In response to these comments, the design team developed Concept 2, incorporating the recommended creative ideas and further refining the design through a series of meetings with end users, base technical representatives, and the LANTDIV project management team. This was followed by the development of two additional concepts prior to arrival at the Final Concept. This Final Concept incorporated the comments received on each of the presentation concepts.

Acceptance signatures from all appropriate representatives were obtained based on the Final Concept and are included in Section 1 of this Report.

The issues and comments generated during various brainstorming sessions and their evaluations are documented and included in Section 5 of the report. As the design progresses during the workshop, the design team responds to the ideas for ultimate disposition in the next concept. Pertinent meeting agendas, meeting minutes, and telephone conversation records are listed in chronological order and are also included in Section 5 of the report.

FACD WORKSHOP AGENDA

P-995, Waterfront Recapitalization, Santo Stefano

Dates: 10-20 February 2003

Location: VILLA DEL PARCO ALBERGO RESIDENZIALE

VIA DON VICO - -07024 LA MADDALENA (SS)

Telephone - 0789720026

LDIV PM: Ms. Laurie Neitzke

Design A&E: RLF, Inc., Project Managers – Charles Hutchison/David Boldt

Facilitator: Charles McDuff, PE, CVS, CCE

Lewis & Zimmerman Associates, Inc.

DATE/TIME	ACTIVITY	LEAD BY
Sunday 9 February 1400 Hours and after	Project Development Team (PDT) sets-up Meeting Room	McDuff, PDT
1700 Hours	FACD Team Leadership meeting.	FACD Team
Monday 10 February 0700 Hours	PDT assembles and prepares for presentation.	PDT
0800 Hours	KICK-OFF MEETING	
	Introductions.	McDuff
	Opening Comments: FACD Facilitator; LDIV FACD Manager; LDIV Project Management.	McDuff Bowe Neitzke
	User group opening comments concerning their functions, what they do, how they do it, etc., and their expectations of the FACD process.	User Representatives
	Comments on Functions of Facility / Function Analysis.	McDuff
	CONCEPT 1 PRESENTATION: Each discipline makes a presentation of their initial concept for the project. Presentations will include comments on how they expect the facilities to function, based on their current understanding of the users' operations.	Boldt, Hutchison, PDT
	Participants comment on the Concept 1 design. Initial "sidebar" meetings are scheduled as needed.	McDuff, PDT
1200 Hours	Lunch – Provided for all participants.	All Participants

DATE/TIME	ACTIVITY	LEAD BY
1300 Hours	Function Analysis Phase: A Function Analysis will be conducted to assure a thorough understanding of all of the functions involved in the project.	McDuff
	Creative Phase: All participants brainstorm ways in which to address the comments received earlier in the day and ways in which to improve the design in order to respond to functional requirements, reduce life cycle costs and resolve emerging issues.	McDuff
	Preliminary Evaluation Phase: The PDT evaluates the ideas brought out in the Creative Phase to determine which will be carried forward.	McDuff
	Task Assignments: Based on the work of this day, PDT members will receive assignments for incorporation into the next Concept Presentation.	Boldt, Hutchison
1700 Hours	Team meeting to assess progress. Each discipline reports on progress to date.	Boldt, Hutchison, McDuff
Tuesday 11 February 0800 Hours	Group Meetings: PDT members meet with base and user counterparts during the day to resolve issues and obtain additional information.	PDT
	Executive In Brief (If required - time and location to be determined).	Neitzke, Boldt, Hutchison, McDuff
	The PDT works on the development of Concept 2 based on information received the previous day.	PDT
1600 Hours	Team meeting to assess progress. Each discipline reports on progress to date.	Boldt, Hutchison, McDuff
Wednesday 12 February 0800 Hours	Continue design and investigation work. Prepare for Concept 2 Presentation.	PDT
1700 Hours	Team meeting to assess progress. Each discipline reports on progress to date.	Boldt, Hutchison, McDuff
Thursday 13 February 0700 Hours	PDT assembles and prepare for presentation.	PDT
0800 Hours	CONCEPT 2 PRESENTATION: Each discipline will make a presentation of their findings and recommendations. Presentation should include key sketches and handouts as required to inform participants and to invite their comments.	Boldt, Hutchison, PDT

	Participants comment on the Concept 2 design. Necessary "sidebar" meetings are scheduled between appropriate parties.	McDuff, PDT
	Creative Phase: All participants brainstorm ways in which to address the comments received earlier in the day and ways in which to improve the design in order to respond to functional requirements, reduce life cycle costs and resolve emerging issues (if needed).	McDuff
	Preliminary Evaluation Phase: The PDT evaluates the ideas brought out in the Creative Phase to determine which will be carried forward. (If needed.)	McDuff
	Task Assignments: Based on the work of this day, PDT members will receive assignments for incorporation into the Concept 3 Presentation.	Boldt, Hutchison
1700 Hours	Team meeting to assess progress. Each discipline reports on progress to date.	Boldt, Hutchison, McDuff
Friday 14 February 0800 Hours		DDT
	The PDT works on the development of Concept 3.	PDT
1700 Hours	Team meeting to review progress.	Boldt, Hutchison, McDuff
Monday 17 February 0800 Hours	The PDT continues work on the development of Concept 3 and prepares for the Concept 3 Presentation.	PDT
1700 Hours	Team meeting to review progress.	Boldt, Hutchison, McDuff
Tuesday 18 February 0700 Hours	PDT assembles and prepares for presentation.	PDT
0800 Hours	CONCEPT 3 PRESENTATION: Each discipline will make a presentation of their findings and recommendations. Presentation should include key sketches and handouts as required to inform participants and to invite their comments.	Boldt, Hutchison, PDT
	Participants comment on the Concept 3 design. Final "sidebar" meetings are scheduled.	McDuff, PDT
	Creative Phase: All participants brainstorm ways in which to address the comments received earlier in the day and ways in which to improve the design in order to respond to functional requirements, reduce life cycle costs and resolve emerging issues. (If needed.)	McDuff and Bowe

DATE/TIME	ACTIVITY	LEAD BY
	Preliminary Evaluation Phase: The PDT evaluates the ideas brought out in the Creative Phase to determine which will be carried forward. (If needed)	McDuff
	Task Assignments: Based on the work of this day, PDT members will receive assignments for incorporation into the next Concept 3 Presentation.	Boldt, Hutchison
1700 Hours	Team meeting to review progress.	Boldt, Hutchison, McDuff
Wednesday 19 February 0800 Hours	PDT works on final presentation and final input to report. Floor plans, mechanical and electrical layouts, site plan and important building sections are finalized. Refine cost estimate and develop a bid additive list if required. Identify construction methods, phasing and schedule for the project (if applicable).	PDT
	Team members work on final presentation and report contributions. Selected task group detailed to meet with ROICC for constructability input to report. Review list of invitees for the Final Concept Presentation for the next day and reconfirm attendees.	
	Complete FACD Report.	Boldt, Hutchison, McDuff, Bowe
1700 Hours	Review progress and prepare for the Final Concept Presentation.	Boldt, Hutchison, McDuff, Neitzke, Bowe
Thursday 20 February		DD.T.
0700 Hours	PDT assembles and prepares for presentation.	PDT
0800 Hours	FINAL CONCEPT PRESENTATION: A formal presentation of final concept. All disciplines make brief but comprehensive presentations. The PDT will identify the status of remaining issues and plans for resolution. The attendees are invited to submit their final comments in writing. Final comments will be answered during this session.	Boldt, Hutchison, PDT
Immediately Following the Final Presentation	SIGN-OFF: All participants sign-off on the final FACD Concept.	McDuff & Bowe
	Executive Out Brief (if required - time and locations to be determined).	Neitzke, Boldt, Hutchison, Bowe, McDuff
	Wrap up Session - LANTDIV, PMs and FACD Facilitator review events of the past two weeks to determine effectiveness of the effort expended by all parties.	Neitzke, Boldt, Hutchison, Bowe, McDuff

END-USER INTERVIEWS:

In addition to the activities identified in the preceding agenda, there were interviews with representatives from the various activities and stakeholders in the project. Most of these meetings were for the purpose of collecting design comments from the end-users, so that the various concepts could be modified to better meet their functional requirements. These meetings included:

MONDAY - 10 February 2003

1300 Hours Supply/Hazardous Materials

1400 Hours Safety and Fire Marshal

1600 Hours Environmental

TUESDAY - 11 February 2003

0800 Hours ISD

0800 Hours Squadron

0830 Hours MWR

0900 Hours EFAMED (Electrical)

1130 Hours Security

1300 Hours Port Services

1600 Hours BEQ

WEDNESDAY - 12 February 2003

0800 Hours Public Works/BOSC

0830 Hours NCIS

THURSDAY – 13 February 2003

0800 Hours Special Briefing – NSA Commanding Officer and Squadron

1100 Hours Port Services

1400 Hours MWR

1500 Hours Safety/Fire Marshal

FRIDAY – 14 February 2003

0800 Hours ISD/NCTAMS

0900 Hours BEQ

1300 Hours Public Works/BOSC

1400 Hours HAZMAT/Supply

FRIDAY - 14 February 2003 (Continued)

1500 Hours Security

1600 Hours Squadron

<u>TUESDAY – 18 February 2003</u>

0900 Hours Port Services

1000 Hours MWR

1430 Hours Public Works/BOSS

1500 Hours Supply/HAZMAT

1600 Hours BEQ

1630 Hours Security

1700 Hours SBA



no SHEET N	O.: 1 of 4		
FUNCTION			
NOUN	KIND		
Engines	В		
Engines	В		
Injectors	S		
Batteries	S		
Welding	S		
Sandblasting	S		
Canvas	S		
Engines	В		
Electrical System	S		
Engine Parts	S		
Batteries	S		
Batteries	S		
Computers	S		
Equipment	S		
Equipment	В		
Fuel	S		
Gear	В		
Alert Status	RS		
Workers	RS		
Flexible Office Space	В		
te Changing Requirements	В		
her ver	Changing		



Receive Classify Process Dispose Dispose Store Receive	Haz Wastes Haz Wastes Haz Wastes Repackaged Haz Wastes Aerosol Cans Empty Drums	B B B B
Classify Process Dispose Dispose Store Receive	Haz Wastes Haz Wastes Repackaged Haz Wastes Aerosol Cans Empty Drums	B B B
Classify Process Dispose Dispose Store Receive	Haz Wastes Haz Wastes Repackaged Haz Wastes Aerosol Cans Empty Drums	B B B
Process Dispose Dispose Store Receive	Haz Wastes Repackaged Haz Wastes Aerosol Cans Empty Drums	B B
Dispose Dispose Store Receive	Repackaged Haz Wastes Aerosol Cans Empty Drums	B B
Dispose Store Receive	Haz Wastes Aerosol Cans Empty Drums	В
Store Receive	Empty Drums	
Receive		C
		S
_	Haz Materials	В
Store	Haz Materials	RS
Recharge	Batteries	S
Build-up	Pallets	S
Administer	Work	RS
Shelter	Nine Forklifts	S
Serve	Officers	В
Serve	Enlisted	В
Administer	Maintenance of Supplies	S
Host	Special Events	RS
Serve	Beverages	В
Make	Sandwiches	В
Handle	Money	RS
Facilitate	Computer Games	S
Serve	Snacks	В
	Administer Shelter Serve Serve Administer Host Serve Make Handle Facilitate Serve	Administer Work Shelter Nine Forklifts Serve Officers Serve Enlisted Administer Maintenance of Supplies Host Special Events Serve Beverages Make Sandwiches Handle Money Facilitate Computer Games Serve Snacks HO = Higher Order G =



PROJECT: P-995 – WATERFRONT RECAPITALIZATION – Santo Stefano SHEET NO.: 3 of 4				
		FUNCTION		
DESCRIPTION	VERB	NOUN	KIND	
MWR – FLEET RECREATION FACILITY				
	Provide	Recreation Opportunities	В	
(Note: in no-alcohol, no smoking facility) →	Entertain	Singles	В	
	Facilitate	Communications	S	
	Facilitate	Learning	RS	
	Store	Belongings	RS	
	Sell	Snacks	S	
	Administer	Activities	RS	
	House/Provide	ITT Services	RS	
	Launder	Clothes	RS	
	Show	Movies	В	
	Issue	Reading Materials	В	
MWR – FITNESS CENTER				
	Seat	Spectators	S	
	Facilitate	Fitness	В	
	Store	Equipment	RS	
	Support	Patrons	В	
	Support	Participants	В	
	Administer	Activities	RS	
	Facilitate	Communications	RS	
	Sell	Refreshments	S	
	Support	Hygiene	В	
	Support	Basketball	В	
	Support	Volleyball	В	
Function defined as: Action Verb Kind: B = Basic S = Secondary RS = Required Second	HO = Higher LO = Lower (dary O = Object	Order U =	Goal Unwanted	



PROJECT: P-995 – WATERFRONT RECAPITALIZATION – Santo Stefano SHEET NO.: 4 of				
	FUNCTION			
DESCRIPTION	VERB	NOUN	KIND	
SUPPLY – HOUSING QUARTERS				
	House	Sailors		
	Administer	Activities	В	
	Store	Maintenance Equipment	RS	
	Maintain	Facilities	S	
	Provide	Recreation Activities	S	
	Sell	Refreshments	S	
	Control	Access	S	
	Control	Activities	RS	
	Facilitate	Communications	RS	
	Meet	Handicap Needs	RS	
	Meet	Italian Law Requirements	RS	
	Facilitate	Privacy	RS	
SUPPORT FLEET				
	Provision	Vessels	В	
	Repair	Vessels	В	
	House	Transient Personnel	RS	
	Supply	Electricity	RS	
	Berth	Vessels	В	
	Operate	Utilities	RS	
Function defined as: Action Verb Kind: B = Basic Measurable Noun S = Secondary RS = Required Secondary	HO = Higher LO = Lower ary O = Object	Order U =	Goal Unwanted	

CREATIVE IDEA LISTING

The following partial listing of creative ideas was extracted from the hundreds of such suggestions that were brought up in the more than 40 one-on-one user group interviews that occurred during the FACD workshop. In order to get a better understanding of the many creative thoughts that were a part of these interviews, the reader is referred to the 56 pages of notes that came from those work sessions.

CREATIVE IDEA LISTING



P-995—WATERFRONT RECAPITALIZATION, SANTO STEFANO PROJECT: SHEET NO.: 1 of 2 FACD Value Management NO. **IDEA DESCRIPTION RATING** SITEWORK AND UTILITIES (SW) SW-1 Reconfigure buildings to eliminate or reduce rock excavation 5 SW-2 Use half basketball court to reduce size of gymnasium, to eliminate need for rock 2 excavation SW-3 Reduce number of sanitary pump stations 5 **SW-4** Eliminate need for frequency converter 5 5 SW-5 Simplify construction phasing **SW-6** Remove two existing gas tanks on-site ABD SW-7 5 Route utility trench through warehouse to reduce difficulty and cost of these connections DS **SW-8** Get new ENEL feed to power ships, use generators only as a back-up in emergencies SW-9 Reduce length of pier 2 SW-10 Eliminate security wall located at shoreline DS SW-11 Have port service provide new Dunlop barrier anchorage DS SW-12 Identify contractor laydown areas to minimize contractor barge costs DS **BUILDINGS (BL)** BL-1 Provide no floor drains in the HAZMAT areas 5 BL-2 5 Need to run water main tap to chemical lab for continuous water quality monitoring BL-3 Do not attach roof drains to sanitary lines ABD BL-4 Combine two changing rooms in the Squadron Facilities 4 BL-5 Eliminate one elevator 5 BL-6 5 Use roof of building for security walkway 5 BL-7 Paint boat hulls outside building, eliminate need for large paint booth 5 BL-8 Need to add two offices for site liaison officer BL-9 Review using three-tiered bunks to reduce size of bunk rooms DS BL-10 4 Eliminate separate office in BEQ—front desk to serve as office BL-11 Combine BEQ and MWR laundry facilities 5 BL-12 Boat repair shop would be a good place to locate the Commodore's GIG Shop DS $1\rightarrow 2$ = Not to be Developed; $3\rightarrow 4$ = Varying Degrees of Development Potential;

5 = Most likely to be Developed; DS = Design Suggestion

CREATIVE IDEA LISTING



PROJECT: P-995—WATERFRONT RECAPITALIZATION, SANTO STEFANO SHEET NO.: 2 of 2

FACD Value Management

FACD Value Management		
NO.	IDEA DESCRIPTION	RATING
	BUILDINGS (BL) Continued	
BL-13	Combine port services and squadron conference	DS
BL-14	Minimize fire sprinkler requirements	ABD
BL-15	Consolidate laundry facilities	DS

Rating: $1\rightarrow 2$ = Not to be Developed; $3\rightarrow 4$ = Varying Degrees of Development Potential;

5 = Most likely to be Developed; DS = Design Suggestion

PROJECT:	DJECT: P-995 WATERFRONT RECAPITALIZATION, SANTO STEFANO Function Analysis Concept Development		
ITEM NO.	COMMENT	PROJECT DEVELOPMENT TEAM RESPONSE	
	ISSUES (I)		
I-1	Removal of rock – Neitzke, Bamforth, Boldt	The building has been reconfigured to minimize the impact on the existing rock formations	
I-2	Need to define the extent of fire sprinklers in the buildings – Cain	All new buildings will have fire sprinklers	
I-3	Security/general access to rear of buildings – Boldt	The designers have configured the buildings and the roof so that security personnel can walk their post, along the back of the site, on top of the buildings. This, coupled with improved lighting will greatly improve security's ability to keep this part of the site well protected.	
I-4	Effect of explosive arc – Neitzke, Farmer	OPEN ISSUE – The Secretarial Certification application is being prepared by Bruce Farmer. The effects of the arcs will be unknown until input from DDESB is received.	
I-5	Implementation of Anti-Terrorism/Force Protection -Neitzke, Jenne	OPEN ISSUE – AT/FP issues evaluated and resolved. Deviation/Waiver for OPORD and UFC required	
I-6	Generator Sound Protection – Bolt, Gonzalez, Sellers, Sodano	Issue resolved.	
I-7	Anchorage of Dunlop Barriers – Jenne	Port Services responsible for handling this issue.	
I-8	Cost – Valente	The FACD cost estimate indicates compliance with LANTDIV guidance	
I-9	Meeting of square footage requirements – Boldt, Neitzke	The FACD design indicates compliance with LANTDIV guidance	
I-10	Construction Phasing – Boldt	Construction phasing has been identified, resulting cost increase included in the design estimate, and the designers have coordinated with local project management to be sure that they anticipate the contractor and activity needs during construction.	

PROJECT:	PROJECT: P-995 WATERFRONT RECAPITALIZATION, SANTO STEFANO Function Analysis Concept Development		
ITEM NO.	COMMENT	PROJECT DEVELOPMENT TEAM RESPONSE	
	ISSUES (I)		
I-11	Identification of contractor laydown areas – Boldt	OPEN ISSUE – Expected to be on contractor-supplied barges. Must yet work with Port Services to identify anchorage locations for contractor barges during construction.	
I-12	Utility connections (particularly water) – Bamforth	The utility connections have been identified and resolved.	
I-13	Exterior architectural design – Boldt, Neitzke, Farlow	OPEN ISSUE – Will receive input from SBA and other Italian representatives as part of resolving this issue.	



PROIECTS: P-995, Waterfront Recapitalization - Santo Stefano Function Analysis Concept Development SKC Carolina Navarro, BEQ Representative DATE: 10 February 2003 **COMMENTS BY: ITEM** PROJECT DEVELOPMENT TEAM NO. **COMMENT RESPONSE** BEQ be relocated at the farther end and move the gym close to the 1 Will attempt to provide. Fitness center dining area needs to be located at far end of site due to wide foot print. Only other spot available for BEQ Passageways in BEQ' 1st and 2nd floor is for residents only; not a 2 Corridor system will be secured from public passageway transiting from gym to dining area and vice-versa. public. 3 Allocating 5 rooms for E-6 and above on ground floor Assignment of rooms will be handled by BEQ operations. 4 Ground floor – 6 double-up rooms for female Assignment of rooms will be handled by BEQ operations. 5 Second floor – 13 double-up rooms for male Assignment of rooms will be handled by BEQ operations. Need to see the design of each room in big layout print. Have provided Navy standard room 6 layout, 27 July 2001



PROIECTS: P-995, Waterfront Recapitalization - Santo Stefano Function Analysis Concept Development COMMENTS BY: Greg Seip, Don Green, Harry Nothstein; MWR DATE: 10 February 2003 **ITEM** PROJECT DEVELOPMENT TEAM NO. **COMMENT RESPONSE** Need to provide a more workable space for receipt of pallets – two Provided area outside kitchen w/ easy 1 times / week now – three times / week in the future. access Will provide full high school 2 Highly desirable to provide full-court basketball facilities regulation court 3 Would like to have facility entrance changed to make it possible to Will revise to accomplish this choice choose between dining or bar facility. after entering facility. 4 In fitness area, would like to have administrative space adjacent to Will relocate next to reception reception area 5 Would like to have volleyball capability Will have full court on basketball Cross-court will be nonaxis. regulation. 6 Would like to be able to accommodate bands that come in about Have provided raised platform that twice per month – usually a four or five piece band. will serve as a stage. 7 Laundry has been removed. Need to define where it is going. Laundry will be provided at ground (Note – Laundry facilities will serve BEQ and ship personnel) floor lobby. Liberty has center for equipment issue and greeting - need to have Will revise layout to provide view. 8 good view of internet facilities. 9 Need better definition of the number and size of lockers Will prepare layout of lockers for next user group meeting. 10 Laundry units to be high-end residential washers and dryers Noted



PROJECTS: P-995, Waterfront Recapitalization - Santo Stefano Function Analysis Concept Development Greg Seip, Don Green, Harry Nothstein; MWR DATE: 10 February 2003 **COMMENTS BY: ITEM** PROJECT DEVELOPMENT TEAM RESPONSE NO. **COMMENT** Entertainment center equipment has standard requirements. Contact information passed to RLF 11 The electrical engineer, Pablo Gonzales. MWR has a standard package system for the state area. 12 Need to confirm the size and requirements of the toilet facilities Size and requirements have been determined.



PROIECTS: P-995, Waterfront Recapitalization – Santo Stefano Function Analysis Concept Development COMMENTS BY: SKC Tilkens, Charles Hutchison DATE: 10 February 2003 **ITEM** PROJECT DEVELOPMENT TEAM NO. **COMMENT RESPONSE** Single phase plan does not provide for continued operation of supply Will provide phased construction 1 function. Multi-phase approach required to achieve continued operation of 2 Will provide phased construction supply function 3 Phase I: Demolish building 14 and building 8, Construct RUBB Will provide phased construction. building. Move Hazardous Materials into RUBB Building Will consider suggested phasing plan. 4 Phase II: Demolish buildings 104, 4, 13. Construct MWR / BEQ and Will provide phased construction. energy building. Move MWR Will consider suggested phasing plan Phase III Demolish buildings 2 and 12. Construct warehouse and 5 Will provide phased construction. hazmat space, move hazmat from RUBB. Will consider suggested phasing plan 6 Phase IV Demolish RUBB, Construct port services, vacate barge. Will provide phased construction. Will consider suggested phasing plan 7 Construct berthing pier Will provide phased construction. Will consider suggested phasing plan



PROJECTS: P-995, Waterfront Recapitalization – Santo Stefano Function Analysis Concept Development		
СОММ	ENTS BY: Don Green, Harry Nothstein	DATE: 10 February 2003
ITEM NO.	COMMENT	PROJECT DEVELOPMENT TEAM RESPONSE
1	Laundry must be on ground floor, but is more associated with gym and recreation functions than with food / beverage.	Laundry has been provided on ground floor.
2	Group <u>bar & slots</u> with food service.	Have provided bar and slots with food service
3	Method of payment and placement of cashier station to be determined.	Cashier placement has now been determined.
4	Verify need for storage lockers (rental). Verify function (-possible to place outside at back of building?)	Lockers have been determined to be required. Function will not work at exterior.
5	Bar function to be separate from recreation function.	Have provided bar at ground floor.
6	Snack counter with refrigerator and microwaves to serve recreation area. (No vending machines)	Have provided counter.
7	Group gym and fitness areas with other MWR functions. (Move transient rooms away form bar – switch with gym)	Gym will not fit on site if located elsewhere.
8	Kitchen may move to first floor – but a service elevator will be required.	Kitchen will remain on ground floor.
9	Video game area to include 6 "gamecube / playstations" and 8 consoles. (Will confirm)	Have confirmed and provided.



P-995, Waterfront Recapitalization - Santo Stefano PROJECTS: Function Analysis Concept Development LTJG Jim Westermeyer DATE: 13 February 2003 **COMMENTS BY: ITEM** PROJECT DEVELOPMENT TEAM NO. **COMMENT RESPONSE** Concerned about having adequate space for storage and daily access Lt. Moskal worked out a plan for 1 for the Conex container required to accomplish mission. Comment making sure that Conex container applies to the construction period and long term operations space is anticipated and dealt with properly.



P-995, Waterfront Recapitalization - Santo Stefano PROJECTS: Function Analysis Concept Development Beverly Maki DATE: 13 February 2003 **COMMENTS BY: ITEM** PROJECT DEVELOPMENT TEAM **RESPONSE** NO. **COMMENT** Where is the Safety Office? Safety office has been provided at 1 port services building.



PROJECTS: P-995, Waterfront Recapitalization – Santo Stefano Function Analysis Concept Development		
COMMENTS BY: Alessandro Sodano, Architect, EFA Mediterranean		DATE: 13 February 2003
ITEM NO.	COMMENT	PROJECT DEVELOPMENT TEAM RESPONSE
1	Shop/Bunk bldg: Building Classification may be complicated. We need to research and discuss it. Division of shops from office space and dormitories using fire compartments may be a solution.	Will subdivide building into fire rated compartments.
2	Shops (1 st floor): Code reports shall include Italian fire rating and egress calculations. Many rooms may require floor drains to special waste treatment.	Will provide calculations. Floor drains at shops, etc. to run to holding tank.
3	Shops (2 nd floor): Floor shall be fire rated (reinforced concrete)	Floor/ceiling assembly will be fire rated
4	Office spaces: The layout appears confusing, with special regards to natural light distribution and walkways. LCPO office shall relocated or have glass walls.	Will provide offices with designs windows and re-design area.
5	Bunk: (Bldg. Classification): If for transients, use hotel FP regulation. Provide egress capacity calculations	Will provide egress calculations
6	Bunk (Adjacencies): Revise layout. Keep close to each other TV room and lounge, electrical, comm. And similar rooms, enlisted and officers male toilets (& female), etc.	Area is to be redesigned
7	Bedrooms (BEQ): The opening of first toilet door interferes with the use of the lavatory. Replace swinging with sliding (pocket, "Scrigno ®" type)	Will consider sliding door or redesign doors not to interfere.
8	Laundry: Any gas equipment? If yes, check relevant requirements for natural ventilation and fire rating.	No gas will be provided.
9	Kitchen: Check relevant sanitary requirements for food handling areas, as well as fire protection.	Will verify requirements



PROIECTS: P-995, Waterfront Recapitalization - Santo Stefano Function Analysis Concept Development COMMENTS BY: SKC NAVARRO, SUPPLY DEPT. NSA LA MADDALENA DATE: 18 February 2003 ITEM PROJECT DEVELOPMENT TEAM NO. **COMMENT RESPONSE** Ironing board and iron must be provided to each room per EFDLANT Will provide as collateral equipment 1 / NAVPAC as part of initial collateral furniture 2 Laundry facilities will be the sole responsibilities of MWR for each Comment noted upkeep and maintenance 3 Transiting from elevator to "Cardio" will be for moving in and out of Comment noted equipment only! MWR must coordinate with BH manager before using secure BEQ corridor.

DATE	E: 10 February 2003		
TIME	: 0800		
LOCA	ATION: Hotel Villa Del Parco		
RE: F	ACD Kick Off Meeting		
ATTE	ENDEES/PARTICIPANTS:		
	<u>Name</u>	<u>Function</u>	Organization
See A	ttendees list		
ITEM	S DISCUSSED:		
1.	Charles McDuff opened the FACD with a brief introduction, description of the FACD process and introductions of all participants.		
2.	The meeting continued with a brief statement from the Base Commander.		
3.	Laurie Neitzke presented an overview of the contract and project schedule. Construction is anticipated to occur between March 2004 and March 2006. The ECC is now \$32.7 million.		
4.	Alessandro Sodano presented an overview of Italian Law requirements and the importance of complying with them.		
5.	David Boldt indicated the importance of the user group meetings, team approach to the FACD. The session continued with a presentation of Concept No. 1.		s, team approach to the FACD.

7. The conference continued with the opening of the floor for comments and or questions.

6.

a. A question was raised regarding the number of bunks that were to be provided in the bunkrooms. The A/E indicated that number would be verified during the user group meetings.

Chuck Bolt presented an overview of the scope for the work involving the electrical generators.

b. Moorings for the Berthing Pier were discussed and it was indicated that it is anticipated that the existing moorings could be re-used and that this would be verified during the design.

- c. It was indicated that phasing would be required. The following is a phasing plan that was discussed:
- 8. Phase 1: Demolish Buildings 14 and 8. Construct RUBB Building. Re-locate HAZMAT function to the RUBB Building.
- 9. Phase 2: Demolish Buildings 104, 4, and 13. Construct Building M (MWR and BEQ), and Central Energy Building.
- 10. Phase 3: Demolish Buildings 2 and 12. Construct Building W (Warehouse and HAZMAT). Relocate HAZMAT from RUBB Building to new facility.
- 11. Phase 4: Demolish RUBB Building. Construct Port Services Area of Building W. Relocate Port Services from Barge to Building W. Remove Barge.
- 12. Phase 5: Construct Berthing Pier.
 - a. The direction of the prevailing winds indicated on the site analysis need to be revised to indicate the summer winds coming from the south and winter winds coming from the northwest.
 - b. A meeting needs to be scheduled with the Architect with the Italian SBA to discuss the removal of rock. Initially a meeting was scheduled for 18 February 2003 but her input needs to be obtained sooner in the FACD process.
 - c. Alessandro Sodano indicated that the Architect with the SBA could be involved in the process but that she has no authority to approve the design concept.
 - d. The amount of glazing to be provided may be determined by the ESQD blast zone. Italian Law requirements for the amounts of glazing must also be considered.

DATE: 10 February 2003

TIME: Part of 0800 Presentation Discussion

LOCATION: Villa Del Parco

RE: Rock

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	Organization
Laurie Neitzke	Project Manager	LANTDIV
Allan Bamforth	Engineer	C. Allan Bamforth Jr. Engineers
Pat White	Architect	RLF
David Boldt	Project Manager	RLF

ITEMS DISCUSSED:

- 1. In the event that the removal of rock is not permitted, the programmed space within the buildings will have to be eliminated because of the reduction of allowable building area.
- 2. The A/E will provide an 'Alternate Conceptual Plan' with a half basketball court
- 3. There are 3 possible scenarios for rock removal:
 - a. The large rock hill and rock along the rear perimeter fence is removed.
 - b. The large rock hill is to remain and the rock along the perimeter fence is removed.
 - **C.** The large rock hill is to remain and the rock along the perimeter fence is to remain except for some minor clean up.

End of Meeting Minutes

DATE: 10 February 2003

TIME: 11:15

LOCATION: Villa del Parco

RE: New water line being installed on site by Italians

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Laurie Neitzke	Project Manager	LANTDIV
Allan Bamforth	<u>Utilities consultant</u>	C. Allan Bamforth, Jr. Engineers
Allessandro Sodano	Architect	EFAMED

ITEMS DISCUSSED:

Per Rick Newberg, Allan Bamforth learned of new water line currently being installed on-site by Italians. Fire hydrants are also being installed.

We need flow information so we can coordinate fire protection. Allessandro contacted Lorenzo Pece at EFAMED for information. Lorenzo will contact Nives to get technical data on the new system. Our project will have to relocate this line during construction.

End of Meeting Minutes

DATE: 10 February 2003

TIME: 1300

LOCATION: Villa del Parco

RE: Supply

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
SKC T. Tilkens	Store Keeper Chief	Supply
David Boldt, et al	Project Manager	RLF
Diana Parish	Interior Designer	RLF
Pablo Gonzalez	Electrical Engineer	RLF
Alessandro Sodano	Architect	EFA MED
Charles Hutchison	Architect	RLF
Luis Roman	Architect	RLF
Lt. Tom Moskal	Public Works Officer	NSA La Maddalena
Jason Rieb	Arch. Dept.	RLF

ITEMS DISCUSSED:

- 1. Pallet storage was discussed for the HAZMAT area. Pallets will be stacked 3 high. Arrangement as indicated on the drawings is acceptable. User does not want this area sprinklered.
- 2. Storage for type 2 oxidizers is required.
- 3. Provide type 4 storage for the Hazardous Process area. Area is required to be enclosed and mechanically ventilated.
- 4. The A/E needs to be provided with list indicating a detailed list of what materials are being stored and the quantity for each by the User. This is required for compliance with Italian Law.
- 5. Tim Tilkens will provide the list for the A/E by 11 February 2003.
- 6. The A/E needs to be provided by the User the specifications for the largest forklift used at the site.
- 7. Hazardous Storage Area needs to be located where the Empty Storage Area is presently located. The Gas Farm needs to be provided where the Hazardous Storage Area is presently located. The Floor Plan will be revised.
- 8. Presently there are not any electrical forklifts being used at the site.
- 9. The Forklift Storage Area needs to be fire rated, and the design will provide provisions. Area to include space for repairs including workbenches and compressor. Forklift repairs will not include welding, painting or hydraulics. Both U.S. and European currents are required and the design will provide provisions.
- 10. Two tables need to be provided in the Build / Break Down Area for the General Warehouse in the middle of the space. Provisions for a computer needs to be provided on the counter adjacent to the pallet storage. These items will be incorporated into the design by the A/E.

- 11. Both male and female locker rooms are required and will to be provided. At least one of which needs to be handicap accessible.
- 12. A private office is required and needs to be provided in the open office area. The remainder of the space needs to accommodate 6 30x60 desks with computers, 2 file cabinets and a copier.

DATE: 10 February 2003

TIME: 1400

LOCATION: Villa Del Parco RE: Safety / Fire Department

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Beverly Maki	Command Safety Office	NSA La Maddalena
Christopher Epps	Safety / Fire Protection	NSA La Maddalena
Charles Hutchison	Architect	RLF
Charles McDuff	Facilitator	LZA

ITEMS DISCUSSED:

A User Group Meeting was held for **Safety / Fire Department**. The following was discussed:

- 1. Charles Hutchison reviewed the phasing of the project with the User.
- 2. General discussion occurred regarding the noise level of the electrical generators.
- 3. General discussion occurred regarding pedestrians crossing the forklift access road from the ship to the buildings. The A/E indicated that pedestrian crosswalks would be provided at key locations.
- 4. The ferryboat waiting area was discussed. The existing ATM machine will be relocated to the lobby of the BEQ and dining Facility. An x-ray machine may need to be located in one of the new buildings.
- 5. The ESQD explosive arc was discussed. The base will need to obtain a waiver to build habitable structures within this arc.
- 6. The A/E indicated that some areas of the building may not be sprinklered if protected by fire rated walls / assemblies.
- 7. The A/E indicated that fire hydrants will be provided even though there is not a fire department on Santo Stefano.
- 8. The fire alarm will report to security at La Maddalena as well as Santo Stefano.
- 9. Separations between occupancies / buildings will be per IBC 2000.

- 10. The A/E indicated that the rear of the site will be fully accessible for safety personnel.
- 11. The Safety Specialist requested that an office be provided. The A/E indicated that it would be added even though it was not in the scope.

DATE: 10 February 2003

TIME: 1600

LOCATION: Villa Del Parco

RE: Environmental

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Dianna Parish	Interior Designer	RLF
LT Tom Moskal	Public Works Officer	NSA La Maddalena
Daniel Jordan	Environmental	NSA La Maddalena
Bruce Farmer	PWD	NSA La Maddalena
Gary Farlow	Architect	LANTDIV
Allan Bamforth	Civil Engineer	Allan Bamforth Engineers
Pablo Gonzalez	Electrical Engineer	RLF
Laurie Neitzke	Project Manager	LANTDIV
Luis A. Roman	Project Designer	RLF
Charles Hutchison	Architect	RLF
Charles McDuff	Facilitator	LZA

- 1. The User indicated that the existing building has material containing asbestos. The A/E indicated that each building has been tested for asbestos and lead based paint and a report is forthcoming.
- 2. It was indicated by the A/E that the project will be LEED 2.1 certified.
- 3. The user indicated that 2 gas tanks located under Fleet Recreation Building must be removed.
- 4. The A/E indicated that the project specifications would be prepared in a way that instructs the contractor how to handle suspicious items that maybe contaminated without specifically mentioning the item.
- 5. No floor drains will be provided in the HAZMAT areas.
- 6. The User will forward to the A/E the quantity of contaminated soil around the fuel tanks that will need to be removed.

- 7. The User will forward to the A/E the location of the new Salt Water line that is currently being installed across the base by the Italians.
- 8. A connection to the main water line for monitoring water supply will provided at the Chemical Lab.
- 9. A copy of the 35% submittal will be forwarded to Bruce Farmer.
- 10. Roof drains will not flow to the wastewater treatment plant.

DATE: 11 February 2003

TIME: 0800

LOCATION: Hotel Villa Del Parco

RE: Squadron

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
LT Ted Fieffer	CSS 22 FPO	CSS 22
Dianna Parish	Interior Designer	RLF
Luis Roman	Project Designer	RLF
Laurie Neitzke	Project Manager	LANTDIV
Bill Craig	Facilitator	LZA
Bill Eddy	CNE Planner	CNE
Charles Hutchison	Architect	RLF

ITEMS DISCUSSED:

A User Group Meeting was held for **Squadron** as indicated above. The following was discussed:

- 1. As instructed, the A/E will change name on the plans to "SOPA" instead of squadron.
- 2. The User requested that an area be added for a CPO sanctuary for 12 chief petty officers. LANTDIV and the A/E indicated that this was not in the scope for this project.
- 3. The design for this area was approved as shown on the drawings. The following reflects the discussions that occurred.
- 4. The office suite must contain space for 5 Department heads (larger work areas) including: Weapons, OPS, Chief engineer, Medical officer, QA officer, plus a combined Chief changing and office area.
- 5. The office suite also must contain a cabin for the Commodore with a changing room.
- 6. Workstations for 9 chiefs (smaller areas) must be provided.
- 7. Workstations for admin must be provided.
- 8. The design will provide space for a command master chief.
- 9. Could combine the two changing rooms that are indicated in the Program.

- 10. The A/E is to provide a combined storage area for the office (cabin).
- 11. The design shall provide provisions for a SIPRNet connection at each station.
- 12. The A/E will provide space for a safe for classified file storage in staff area. 2 locking lateral files would be sufficient; presently 6 are indicated on the plan.
- 13. The A/E will provide space for 3 file cabinets plus bookshelves.
- 14. Provisions for a coffee area is to be provided.
- 15. Provisions for a TV in Commodore cabin is to be provided.
- **16.** The doors will be provided with alarms for intrusion alert.

DATE: 11 February 2003

TIME:0800

LOCATION: Villa del Parco

RE: Information Systems

ATTENDEES/PARTICIPANTS:

<u>Function</u>	<u>Organization</u>
ISD Director	NSA La Maddalena
Field Investigations	RLF
Electrical Engineer	RLF
	-
	ISD Director Field Investigations

- 1. The entire structured cabling system for Buildings M and W was discussed.
- 2. Michael Hackman asked the question "Who funds the electronic equipment (hubs, routers, etc.)?" RLF to provide the cabling and raceway for the structured cabling system. Funds for the electronic equipment are provided from another contract.
- 3. Two fiber optic cables are in the footprint of the new complex. A 3-strand fiber to the pier is not being used and will be removed. Also, a 3-strand fiber to the barge will have to be rerouted.
- 4. Michael requested a loop configuration for routing of fiber optic cable. We will provide.
- 5. Michael requested a 12-strand multimode fiber to each building. We will provide.
- 6. Michael brought up the question for SIPRNET in the Squadron Area. The discussion was shifted to the Squadron User Meetings. It was discussed to will provide SPIRNET connections to each workstation in the Squadron Area.

DATE: 11 February 2003

TIME: 0830

LOCATION: Villa Del Parco

RE: MWR

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
James Anderson	MWR Director	NSA La Maddalena
Dianna Parish	Interior Designer	RLF
John Barja	Food Service	Foodesign
David Boldt	Project Manager	RLF
Charles McDuff	Facilitator	LZA
Harry Nothstein	Food Service Manager	MWR
Don Green	Design Manager	MWR
Gregory Seip	Recreation Director	NSA MWR
Pat White	Architect	RLF
Pablo Gonzalez	Electrical Engineer	RLF

- 1. John Barja discussed the new plan layout based on suggestions from the previous day of relocating the bar and slots to the dining / kitchen area on the ground floor.
- 2. It was indicated that deliveries come in by truck and a forklift delivers pallets to the kitchen receiving area 3 times a week. The kitchen needs exterior access for forklift receiving. The design will be revised to provide area.
- 3. MWR discussed combining Fitness Center and Fleet Rec./ Dining. A/E described the concept and history of the placement decision (site constraints, BEQ sound isolation, etc.) of why the Fitness Center was located at the far end of the site and the BEQ located between these 2 MWR functions. The A/E will continue to explore options to accommodate the collocation of these functions.
- 4. MWR suggests changing entry so that bar patrons don't have to walk into dining room to get to bar / slots. The elevator and bathrooms might be better if not directly accessible off lobby. Provide off corridor, not main lobby. The A/E indicated that elevator, bathrooms and lobby is be reconfigured.

- 5. The administration for the Fitness Center is required to be adjacent to the equipment check in area located within the reception area on the ground floor. The A/E will revise the design as required. The office space provided for two people as shown is acceptable.
- 6. There is not enough room for official half court cross-court basketball. A/E will provide 2 fold up goals on west side of court with striping on the floor.
- 7. There is not enough room for official full sized cross-court volleyball courts. MWR approved the concept of providing the facility with less than full size cross-courts, as long as 1 full size court is provided in the center of the basketball court. The design will provide volleyball post inserts in the floor, but will keep striping to a minimum.
- 8. The A/E is to provide provisions for a batting cage with netting.
- 9. The A/E indicated that batting cages and provision for bands to play on the roof of the gym are not practical.
- 10. MWR has 4 to 5 piece bands that play at the facility about twice a month. A/E to provide a raised platform with seating at one end of the dining room at the Ground Floor that can also serve as a stage.
- 11. Need to define location of the laundry. Issue was brought up that BEQ laundry is typically separate from the shore-based laundry that serves the ship's personnel. An additional laundry is not in the current program. Presently, the laundry room will need to be shared.
- 12. Three people will be working on first floor: Fleet Rec Coordinator, Liberty Coordinator & Rec Aid. The two coordinators can share a two-person office. The Rec Aid will be situated at a "bar-type" of counter, where that person will check out equipment, sell snacks & monitor the Internet area. The P/A & sound system are located behind the counter. The snake bar requires a cash register, microwave and refrigerator. The A/E will provide spaces and provisions for these items.
- 13. Fleet Recreation is the equivalent to "Single Sailor Program". A good example of a well designed facility that was completed in Rota Spain, can be viewed at www.mwrrota.com
- 14. The gymnasium floor will be provided with a multi-sport flooring (rubber sport court is popular). MWR warns that "Mondo" flooring is a problem because the local contractors aren't skilled enough to install the system properly.
- 15. The bleachers at the gymnasium are a potential trip hazard for players. The User will provide chairs instead of bleachers.
- 16. The theater needs sound control but does not necessarily need to be an enclosed room. Sofas are not to be provided. Lounge chairs and beanbag chairs are preferred.
- 17. The laundry is to be open 24 hours per day. The A/E is to provide an entrance so access does not pass through the main dining area.
- 18. The public phones located at Fleet Recreation should have 4 DSN lines and the rest of the phones to be AT&T. A/E will provide counter space with dividers not separate phone rooms.

- 19. MWR requires video surveillance of the weight room, gym, main recreation spaces and dining area for security and safety reasons. The reception area would monitor the system. The A/E will provide raceways and conduit for the system. Others will provide other components.
- 20. Cardio exercise room should be larger than the weights area. A/E will provide a large open area for both leaving MWR to decide location of equipment.
- 21. BEQ rooms adjacent to gym, bar and slot machine areas should be acoustically separated.
- 22. A washer and dryer needs to be provided at the gym check-in desk. The A/E will provide provisions.
- 23. Need to add storage room by the gym for large equipment. The A/E will provide.
- 24. The A/E to provide a space outside of the dining area to eat if space permits.
- 25. MWR now has 24 dryers and 24 washers. Presently, all their equipment is gas that will eventually be replaced with electricity. The design will provide large capacity, electric, residential, non-stacking washers and dryers.
- 26. A/E will provide flooring in Fleet Recreation area that doesn't break falling billiard balls, and also doesn't get scuffed by combat boots. Resilient flooring was discussed, such as linoleum. Also discussed was wood grain sheet vinyl. Scuffmarks will be unavoidable with resilient flooring.
- 27. The snack area will only sell bottled drinks, chips, cookies and candy. The design will provide a back wall counter for vendor displays and a 4-foot glass door fridge.
- 28. A dance area isn't needed on the first floor. The design will provide a space similar to a living room with sofas, large TVs and places to play Playstation. One corner in the area to have a plasma TV on wall with sofa and lounge seating. Another corner will have provisions for another big screen TV, and even another corner to have Nintendo games.
- 29. It was indicated that the Fleet Recreation area functions best when only an open area is provided. If partitions are required, half height walls (1800mm) will be acceptable. The A/E will revise the design for this area. It was indicated that the theater gets loud at times.
- 30. The requirements for the theater sound equipment will be emailed to the A/E while at FACD.

DATE: 11 February 2003

TIME: 1130

LOCATION: Villa Del Parco

RE: Security

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
ENS J. D. Kenoyer	Security	NSA La Maddalena
CPO Sherie Coleman	Security	NSA La Maddalena
Dianna Parish	Interior Designer	RLF
David Boldt	Project Manager	RLF
Luis Roman	Project Designer	RLF
Gary Farlow	Architect	LANTDIV
Carl Jenne	Structural Engineer	Allan & Conrad
Laurie Neitzke	Project Manager	LANTDIV
LT Tom Moskal	Public Works Officer	NSA La Maddalena
Bill Eddy	MILCON Planner	CNE
Pablo Gonzalez	Electrical Engineer	RLF
Anselmo Cuneo	Facilities Planner	NSA La Maddalena
Bruce Farmer	PWD	NSA La Maddalena
Charles McDuff	Facilitator	LZA

ITEMS DISCUSSED:

A User Group Meeting was held for **Security**. The following was discussed:

- 1. The User approved the floor plan as indicated on the drawings.
- 2. It was indicated that the waterside of the base is secure. The backside of the base, adjacent to the mountain is seen as a threat from individuals approaching and throwing grenades.
- 3. The User indicated that the barracks and the communications area need hardening. The A/E indicated that the rear of these buildings would be hardened but it was yet to be determined if the front of the buildings would need to be hardened because the determination of whether the shore was a controlled perimeter was pending.

- 4. There was Discussion of adding Dunlop barriers nearer to shore to deter boats ladened with explosives. This would provide a 25M standoff distance to the buildings that currently does not exist.
- 5. The design will extend the concrete retaining wall at water edge up four feet for AT/FP protection.
- 6. RLF to prepare paperwork/proposal for stand off distance waiver. Paperwork will be forwarded to security and they will forward on to CINCUSNAVEUR.
- 7. The A/E is providing walkways both on ground behind buildings and on the roofs continuous along the entire length of the building for patrols.
- 8. The User requires that lighting be provided to illuminate the mountain and the shoreline. The A/E indicated that lighting would be provided.
- 9. The Manning Post will provide four to eight monitors, one main console board, and two or three Internet servers.
- 10. It was indicated to the A/E that the Reception and OPS area be provided with computer, internet, and phone lines.
- 11. The A/E indicated that the Secure Storage area will be provided cipher lock.

DATE: 11 February 2003

TIME: 1300

LOCATION: Villa Del Parco

RE: Port Services

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
LTJG Jim Westermeyer	Port Service	NSA La Maddalena
CPO Keith Sheller	Port Services Engineer	NSA La Maddalena
Diana Parish	Interior Designer	RLF
David Boldt	Project Manager	RLF
Luis Roman	Architect	RLF
Gary Farlow	Architect	LANTDIV
Carl Jenne	Structural Engineer	Allan & Conrad
Pablo Gonzalez	Electrical Engineer	RLF
Bruce Farmer	Public Works	NSA La Maddalena
Charles McDuff	Facilitator	LZA

ITEMS DISCUSSED:

A User Group Meeting was held for **Port Services** as indicated above. The following was discussed:

- 1. Boat Maintenance Area will be provided with a 16' wide roll up door. Boats are backed in on trailers for repair; the monorail system above the boat extends to the engine shop and small engine shop. A workbench is to be provided with storage shelving against walls.
- 2. Oil Boom area also serve as a Dunlop Barrier repair and maintenance area. There are no specific height requirements for this area.
- 3. The injection shop will be a separate room with hard walls. The User will be atomizing fuel in this space so ventilation will be provided. Fuel leaks may occur so a floor drain that runs to a holding tank will be provided.
- 4. The User requested that the paint locker, paint shop and injection room be located together.
- 5. The battery area will be provided with a wood bench and wood shelving. Hard walls for this room will be provided. Closed cell, 12 volt batteries are stored here.

- 6. Areas of shop will require 480 60-hertz power with a frequency converter.
- 7. Outboard motors are serviced at the small engine shop. A 3' x 6' dip test tank (water) will be provided with a ventilation system for testing outboard motors. The tank needs to be hooked up to a drain and fill valve. Design will provide water, air; work bench and storage shelving.
- 8. 7 different types of inboard engines are serviced in the engine shop. The design will provide a 5 ton monorail system. Engine test stands will be provided by others. The design will provide water, air and a work bench.
- 9. The paint locker room will be provided with a door to outside. It was indicated that no mixing of paint is done here, only storage. The A/E will provide hard walls for this room and storage shelving.
- 10. The paint shop shall be provided with a 3' x 6' filter type paint booth. Ventilation and storage areas for oil based, flammable paint will be provided.
- 11. Sand blast area will be provided with a self-contained bead blaster, approximately. 3' x 6'.
- 12. The weld shop should exchange location with the tool issue room. The area does not need a monorail system. The area should be provided with a weld bench and ventilation system.
- 13. The tool issue room is acceptable as indicated on the drawings. The area will be enclosed with a wire mesh lockable cage and workbench.
- 14. The electrical shop will be provided with one workbench and the space can be open.
- 15. The deck maintenance area will be provides with a workbench and shelving units. The A/E will provide hard walls for this room
- 16. Dunlop barriers are 75 ft long inflated, but only one end needs to be inside the maintenance work area with the rest outside. They are typically brought in by forklift. The design will provide a roll up door to the outside, workbench and shelving.
- 17. The supply / storage area serves only the shop. A counter is to be provided.
- 18. Gear locker will store rain gear and life jackets and is to be accessed from the supply / storage.
- 19. The training room as indicated on the drawings is acceptable to the User.
- 20. The PSDO bunk room will contain a bed, desk with computer. The room will be a building control point. Provisions for a radio for internal communications and a wind-reading monitor will be included.
- 21. It was indicated by the User that the bunk rooms these are to be duty rooms only. A small laundry area is to be provided.
- 22. The port services office will be an enclosed office.
- 23. The assistant service officer will be provided an enclosed office with one desk and conference table for 8.

- 24. LCPO will be an enclosed office for one person with 2 guest chairs.
- 25. The technical library as indicated on the drawings is acceptable to the User.
- 26. The TV and kitchen as indicated on the drawings is acceptable to the User.
- 27. Pier will be 200M long and 10M wide.
- 28. The User requested that a mezzanine area be added for additional storage above rooms that are hard walled. If a space has a ceiling height of less than 7 ft. it does not count as square footage.
- 29. The battery room and weld shop will need frequency converters.
- 30. Storage shelving through out the area will be 18" deep, typical.
- 31. The A/E was instructed to revise the janitor's closet to a clean up area with hand wash sink.
- 32. The Design will provide eye wash stations and safety showers to shop areas.
- 33. The A/E will provide compressed air for all shop areas.
- 34. The A/E will provide provisions for a PA announcement system for Port Services that is to be both all-call and room addressable.

DATE: 11 February 2003

TIME: 1600

LOCATION: Villa Del Parco

RE: BEQ

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	Organization
Dianna Parrish	Interior Designer	RLF
Pablo Gonzalez	Electrical Engineer	RLF
Charles McDuff	Facilitator	LZA
SKC Carolina Navarro	BEQ Representative	NSA La Maddalena
Luis Roman	Project Designer	RLF
David Boldt	Project Manager	RLF
Charles Hutchison	Architect	RLF

- 1. The A/E reviewed the 2 + 0 standard room layout and requirements with the user.
- 2. The room layout was acceptable as currently indicated on the drawings.
- 3. The user requested that a building wide VCR system be accommodated into the design. The A/E will provide.
- 4. The A/E requested moving BEQ rooms adjacent to the gym be relocated to another location on site. Discussion of site constraints explained the restrictions involved and the inability of meeting this request. The rooms will be acoustically isolated.
- 5. Storeroom is acceptable as presently indicated on the drawings. Linens such as comforters, sheets and towels are stored at this location.
- 6. Provisions for a microwave will be provided at the rooms. Even though a cook top and ironing board are indicted on the Navy BEQ Standard 2+0 plan, the A/E was instructed not to provide these items. The ceiling fans as indicated will remain in the design.
- 7. The office is acceptable as currently indicated on the drawings. Videotape movies will be stored here that will be checked out by people staying in the rooms.
- 8. The corridor exit doors on both floors adjacent to the Fitness Center will be alarmed and monitored. The corridor doors at the Ground floor at the office end of the BEQ and the First Floor at the same

end will be provided with a card key system that will also be provided at the room doors. Only provisions for the monitoring system will be provided.

DATE: 12 February 2003

TIME: 0800

LOCATION: Hotel Villa Del Parco

RE: Public Works / BOSC

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Diana Parish	Interior Designer	RLF
David Boldt	Project Manager	RLF
Luis Roman	Architect	RLF
Gary Farlow	Architect	LANTDIV
ENS Jennifer Cheswick	PWD Site Officer	NSA La Maddalena
LT Ted Fieffer	CSS 22 FPO	CSS 22
LT Tom Moskal	Public Works Officer	NSA La Maddalena
Bill Eddy	MILCON Planner	NAVEUR London
Pablo Gonzalez	Electrical Engineer	RLF
LCDR John Sager	CSS22 ENG	CSS 22
Rick Newberg	Public Works	NSA La Maddalena
Charles McDuff	Facilitator	LZA
Lucio Valle	Boss Contract Project Manager	GEMMO Impianti

ITEMS DISCUSSED:

BOSC Areas:

- 1. The A/E reviewed BOSC storage area located near warehouse with the User. The location was acceptable as indicated on the drawings. The size indicated was 70 SM. They currently have 50 sq. meters. The A/E to add more 18"D shelving, a computer with desk, and a work table for breaking down incoming supplies.
- 2. The A/E to add an overhead roll down door for receiving pallets delivered by forklift. The A/E will also add a regular 36"W door next to it.

- 3. BOSC indicated that they would prefer to have their storage area adjacent to their office but the remote location due to site constraints as indicated on the drawings was acceptable.
- 4. BOSC indicated the need to have a monitoring system in their office to monitor the water treatment facility, generator area, their storage area, etc. Provisions for this system will be provided in the design.
- 5. The user needs 20 lockers, 2 for women and 18 for men; and a private office big enough for a conference table for 4 people in addition to the desk; 4 open office workstations. The user indicated that they would prefer enlarging the office suite to 54 sq. meters even if it means reducing the locker / shower areas. The A/E indicated that they would try to accommodate these requests in the design.
- 6. The User mentioned that each generator currently has it's own day tank and requested that one be provided for use by all the generators. The A/E indicated that the generator project is not in the scope, but would record the request.

Public Works Office:

The User requested that a private office with a desk and a conference table for 4 people be added in their office space; then provide 4 or 5 open office workstations.

RE: H	AZMAT		
ATTE	NDEES/PARTICIPANTS:		
	<u>Name</u>	<u>Function</u>	<u>Organization</u>
SKC T	T. Tilkens	LCPO Shed	NSA La Maddalena
Diana	Parish	Interior Designer	RLF
Charle	es Hutchison	Architect	RLF
HAZM	IAT representatives delivere	d the following information to the R	LF team at the Villa Del Parco
The fo	llowing information was prov	vided by HAZMAT:	
1.	1. Large forklift size: 100'W X 273"L X 145"H		
2.	2. Maximum flammable drum storage: 120 drums. These are 55-gallon drums that can be stacked two high.		
3.	Gas bottle storage: 20 palle	ets at 42" x 60". Gas bottles are laid	on their side on the pallets.

DATE: 12 February 2003

LOCATION: Villa Del Parco

End of Information Provided.

TIME:

DATE: 12 February 2003

TIME: 0830

LOCATION: Villa Del Parco

RE: NCIS

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
LT Ted Fieffer	Public Works Officer	NSA La Maddalena
Al Myers	NCIS	NSA La Maddalena
Charles Hutchinson	Architect	RLF
John Zotto	NCIS	NSA La Maddalena
Pablo Gonzalez	Electrical Engineer	RLF
Bill Craig	Facilitator	LZA

ITEMS DISCUSSED:

- 1. We discussed the ESS requirements. RLF will provide a raceway system and fiber optic cables for the surveillance cameras. NCIS will design and provide the location of the cameras to RLF. Coordinate with Bruce Bittenbinder.
- 2. A possibility that cameras will be installed before Waterfront Recapitalization starts construction. If this is the case, RLF will have to relocate cameras under the Waterfront Recapitalization Project. RLF will coordinate with Bruce to minimize the possible relocation of cameras.

DATE: 12 February 2003

TIME: 0915

LOCATION: Hotel Villa Del Parco

RE: Squadron

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Dianna Parish	Interior Designer	RLF
LT Ted Fieffer	CSS 22 FPO	CSS 22
LCDR John Sager	CSS 22 ENG	CSS 22
Pablo Gonzalez	Electrical Engineer	RLF
Luis Roman	Project Designer	RLF
Charles McDuff	Facilitator	LZA
Charles Hutchison	Architect	RLF
David Boldt	Project Manager	RLF
Laurie Neitzke	Project Manager	LANTDIV
Carl Jenne	Structural Engineer	Allan & Conrad
Gary Farlow	Architect	LANTDIV

<u>ITEMS DISCUSSED</u>:

A User Group Meeting was held for **Squadron** as indicated above. The following was discussed:

- 1. Charles Hutchinson reviewed both existing and proposed site plans, reviewed construction phasing, and rock removal.
- 2. Key concerns were expressed: The User originally asked for 2500 square feet and feel their space has been significantly reduced. The User also wants a private conference room as part of their suite rather than one shared with Port Services. The User also indicated that they want a Chief's Sanctuary and said the Three Star Admiral supports this. Charles Hutchinson pointed out that this would be an off-site function as discussed and decided in previous meetings.
- 3. The previous program from February '02 allocated 1636 square feet for Squadron, plus a shared conference room with Public Works.
- 4. Discussion occurred regarding the possibility of building a Chief's Sanctuary above a one-story portion of the warehouse building in the future as a separate project.

- 5. A new SSGN concept has evolved since conception of this project that involves a new sub that will be docked here and will add approximately 320 more people who may need transient office space. They may even keep the barge for birthing.
- 6. Two crew changes need to be accommodated in this space.
- 7. Three LCM boats docked at the pier may go away in future. Could possibly shorten length of new pier or let water taxis use new pier. Truck ferry would stay as is.
- 8. The A/E was instructed to combine the chief and Commodore's cabin into one open room with an accordion divider, leaving the Commodore's side larger.
- 9. The conference room needs to be cleared for secret and SIPRNet connections added. The door is to provide cipher lock.
- 10. The entire suite needs to be cleared for secret.
- 11. It was indicated that a portion of staff office is to change to smaller desks, and provide as many as will fit.
- 12. The A/E was instructed to add a safe (locking file cabinet).
- 13. The A/E was instructed to delete the two changing rooms.
- 14. The A/E was instructed to include provisions for copier, fax, shredder, bookcases and lateral file cabinets in shared area.
- 15. The design will provide a drop for SIPRNet on each workstation.
- 16. The A/E was instructed to add a secure Communications room.
- 17. The User indicated that they will use the shared break room for coffee.
- 18. Discussion of GIG area occurred: 180 square feet; storage area for engine; The A/E will talk to Port Services to share some space. The area is to be provided with one desk, 1 lateral file cabinet, small toolbox and work bench; spaced to be more like a shop.
- 19. Discussion occurred regarding how the size of the area was determined:

20. RLF Program: Feb. '02 152 sq. meters ~ 1636 sq. ft. 21. RLF design: Feb. '03 169.18 sq. meters ~ 1821 sq. ft.

22. P. 80: 1950 S.F.

23. BFR: 2325 S.F. – 500 S.F. (shared conf.) – 1825

24. Provided 29 SM shared conference room with seats for 24.

DATE: 13 February 2003

TIME: 1115

LOCATION: Villa Del Parco

RE: Port Services

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Dianna Parish	Interior Parish	RLF
Luis Roman	Project Manager	RLF
Gary Farlow	Architect	LANTDIV
Pablo Gonzalez	Electrical Engineer	RLF
Laurie Neitzke	Project Manager	LANTDIV
LTJG Jim Westermeyer	Port Services	NSA La Maddalena
Charles McDuff	Facilitator	LZA
David Boldt	Project Manager	RLF
Brad Cain	Engineer	RLF

- 1. The User would like training room to accommodate 60 people and located closer to Port Services shop area. The design will provide an accordion door to divide the training room. The A/E will try to incorporate.
- 2. A/E to look at reducing size of bunkrooms and use three tiered bunk beds.
- 3. A/E to look at relocating the medical suite closer to the shop areas. The office area only needs to accommodate one person, and the exam room needs to be larger to accommodate three supply storage racks in addition to what is presently shown on plan.
- 4. A/E to look at relocating the secured conference room adjacent to SOPA and Public Works office area. The Port Services office and the Assistant Port Services office will be relocated to where the conference room is currently shown on the drawings. The LCPO office will be relocated to an exterior wall for Italian light requirements.
- 5. The design will add the Squadron GIG area into an area adjacent to the boat maintenance area and provide a large roll up door to the exterior.
- 6. A/E to look at relocating the electrical room into Boat Maintenance area.

- 7. The design will add two offices for the Liaison Officer.
- 8. Port Services is to have a working session with A/E to layout boats along pier so that the length of the pier can be verified.

DATE: 13 February 2003

TIME: 1200

LOCATION: Hotel Villa Del Parco RE: MWR Food Service / Dining

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Jim Anderson	MWR Director	NSA MWR
Harry Nothstein	Club Coordinator	NSA MWR
Greg Seip	MWR Recreation Director	NSA MWR
Jody Hilman	MWR Intern	NSA MWR
Don Green	MWR	NPC
John Barja	Food Service Consultant	Foodesign

ITEMS DISCUSSED:

- MWR would like to divide (movable partition) the dining area for reduced seating for slow periods and /or special functions.
- Locate divider in space between pizza/deli line and burger/fry line
- When divider is closed, all orders will be filled off the pizza/deli line. Buffet and self-serve beverages will be closed. Beverage service / soft drinks will be served from the bar soda station.

DATE: 13 February 2003

TIME: 1400

LOCATION: Villa Del Parco

RE: MWR

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
James Anderson	MWR Director	NSA La Maddalena
Dianna Parish	Interior Designer	RLF
John Barja	Food Service	Foodesign
David Boldt	Project Manager	RLF
Charles Hutchison	Architect	RLF
Harry Nothstein	Food Service Manager	MWR
Don Green	Design Manager	MWR
Gregory Seip	Recreation Director	NSA MWR
Pat White	Architect	RLF
Pablo Gonzalez	Electrical Engineer	RLF
Luis Roman	Architect / Project Designer	RLF
Jody Hillman	MWR Intern	NSA La Maddalena

ITEMS DISCUSSED:

A second User Group Meeting was held for **MWR**. The following was discussed:

- 1. A/E was requested to add a storage room if possible off of gym to store folding chairs, batting cage, volleyball equipment, etc.
- 2. The design provides the reception located directly at the main entrance, and an admin office located with the reception, as well as the checkout equipment storage room. These three spaces should be open to each other in one big open room. The reception desk needs to have a roll down gate, and the space needs to be lockable.
- 3. The location of the weight and cardiovascular areas are acceptable as shown on the drawings.
- 4. The User expressed concern that the locker rooms seemed small. They currently have 3 showers in each of the male and female shower areas.

- 5. Requested (again) TV cameras for monitoring cardio, weight and gym areas. Also requested an intercom / public address system with the controls located at the reception desk. A/E reviewed that we could provide the conduit and connections for those functions, but do not provide the actual equipment as part of the construction contract.
- 6. In the Cardio area, some treadmills will be facing out over the water, and some in facing the gym. The User will use a wireless TV viewing capability with headphones and controls at each cardio station. The design will add banks of TVs on each side of cardio equipment, approximately 6 TVs at each set of treadmills. The User prefers rows of cardio equipment rather than long rows and the A/E will try to provide.
- 7. In the dining and bar area, the one primary entrance off of lobby was acceptable as now shown on plan. An accordion door has been added to divide the space. The design adds two sets of French door style entries added off the front of the building directly into the dining areas. Barrier walls will be added outside between columns for force protection issues to accommodate this. A/E will incorporate. The rest of the overall layout for the dining, bar and kitchen areas are acceptable as currently shown on the drawings.
- 8. The User requested that 24 washers and 48 dryers be provided. The dryers to be stacking type. The User has a source for this dryer type, purchased from the UK. They are individual units that stack with a "stackable kit" that is purchased separately. These dryers are labeled by the manufacturer as commercial. User is to provide a cut sheet for these dryers to the A/E. Would like TVs added, as well as security monitoring capability, which would be routed back to the BEQ check-in desk. The design will provide provisions for these systems.
- 9. The BEQ check-in desk will function as a hotel lobby reception desk.
- 10. Food storage areas will be hooked up to back up power form generators.
- 11. Users are still to let the A/E know the exact requirements for the Storage Locker function. A/E suggested a built-in wire cage locker system that has worked successfully in similar installations.
- 12. The following notes refer to the Fleet Recreation areas:
- 13. The interior design of the space is to reflect a "Little America" image, more like a bar / lounge in the United States.
- 14. The User requested that the phones be relocated into a 24-hour accessible area.
- 15. The User requested that one office be adjacent to the check-in desk. The second office can be located elsewhere. The A/E indicated that they would revise the design.
- 16. The Internet area is too large as currently shown. The A/E will reduce the size and make it more private. The User does not intend to monitor this space closely. The design will provide approximately 12 to 15 Internet computers, and add one shared printer in the space.
- 17. The A/E indicated that the size of Nintendo area was increased.
- 18. The Playstation area also will be hooked up to the Internet so that people can play others all over the world.

- 19. The check-in counter will be bigger to accommodate the snack bar function as well as equipment checkout functions. Equipment storage will be incorporated for storing of pool table balls and racks, table tennis paddles and balls, etc. One person will man the check-in counter at a time.
- 20. The User would like the seating arrangement in the theater rotated to run the length of the room rather than the width. The A/E will show only lounge style chairs and add beanbag chairs in the front row. The User would like the room to accommodate 15 to 20 people. The A/E indicated that they would maximize the number of seats.
- 21. The User requested a Sound, Light and Video package. They are to provide A/E with cut sheets and information for this function so that they can plan accordingly. A/E is also waiting for the Theater Package information from the User.

DATE: 14 February 2003

TIME: 0900

LOCATION: Villa Del Parco

RE: BEQ

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	Organization
Dianna Parish	Interior Designer	RLF
Laurie Neitzke	Project Manager	LANTDIV
Luis Roman	Architect / Project Designer	RLF
SKC Carolina Navarro	SUPPO, Acting / BH	NSA La Maddalena
Charles McDuff	Facilitator	LZA

- 1. The TVs in each room need to be connected back to the check-in desk so that they can broadcast special alerts. The A/E will provide provisions.
- 2. The design does not need a separate office for the BEQ. The check-in desk serves as the office. Guest chair for second person will be provided.
- 3. VCR videotape storage cabinet at check-in desk will be provided.
- 4. An under counter refrigerator at check-in desk is to be provided.
- 5. A sofa is to be provided at check-in desk if there is room.
- 6. The A/E was instructed to provide a storage area behind check-in counter that is lockable and not visible from the front. Linens and bottled water will be stored here.
- 7. A/E to provide connections and conduit for security cameras that are to be monitored from the check-in desk. Cameras are to view the corridors.
- 8. A storage room needs to be added to the second floor.
- 9. The User requested a card-swipe entry system into the BEQ suites and corridors.
- 10. The bedrooms are acceptable as currently indicated on drawings.
- 11. The User requested that the BEQ have a washer and dryer facility that is separate from the MWR facility. Based on current ratio of 8 washers and 8 dryers to 72 rooms (1 to 9), we would need to

provide 3 washers and 3 dryers for the new facility. This is not a programmed space. The BEQ will have to use the MWR laundry facility.

DATE: 14 February 2003

TIME: 1300

LOCATION: Villa Del Parco RE: Public Works / BOSC

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	Organization
Dianna Parish	Interior Designer	RLF
Charles Hutchison	Architect	RLF
ENS Jennifer Cheswick	PWD Site Officer	NSA La Maddalena
Lt Tom Moskal	Public Works Officer	NSA La Maddalena
Avolio Giso	Site Manager	GEMMO
Rick Newberg	BOSS Contract	GEMMO/W/S
Lucio Valle	BOSS Contract	GEMMO
Luis Roman	Project Designer / Architect	RLF
Gary Farlow	Architect	LANTDIV
Brad Cain	Mechanical/Pump/FP	RLF
Pablo Gonzalez	Electrical Engineer	RLF

ITEMS DISCUSSED:

A User Group Meeting was held for **Public Works, BOSC Contractor**. The following was discussed:

BOSC Area:

- 35. The BOSC storage room is acceptable as indicated on the drawings. A 10 ft wide roll up door and a man door will be provided.
- 36. The BOSC office will provide space for plotter, printer, 4 30x60 desks and storage for 60 2" binders.
- 37. The User requested that the break room provide seating for 20 people. The A/E indicated that they would try to maximize the space but would have to stay within program.
- 38. The User indicated that nothing in his space requires being on emergency power.

- 39. The User indicated that he has hazardous materials located in conex boxes located at various locations around the base. The User will provide the A/E a list of these materials. These materials are not anticipated in being stored in the new building.
- 40. The locker room will provide lockers for 35 men and a few for the women.

Public Works:

- 1. The private office is acceptable as indicated on the drawings.
- 2. The open office is to provide space for 4 desks, work table, 1 lateral file and copy machine.

DATE: 14 February 2003

TIME: 1400

LOCATION: Villa Del Parco

RE: HAZMAT / Supply

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Diana Parish	Interior Designer	RLF
Pablo Gonzalez	Electrical Engineer	RLF
Charles McDuff	Facilitator	LZA
Charles A. Hutchison	Architect	RLF
Vince Diega	T-Shed Supply	NSA La Maddalena
Lt. Tom Moskal	Public Works Officer	NSA La Maddalena
Luis Roman	Project Designer / Architect	RLF

- 1. The HAZMAT Processing Area is acceptable as indicated on the drawings. A 10 ft wide roll up door will be provided.
- 2. Empty Storage / Hazardous storage area is acceptable as indicated on the drawings. A 10 ft roll up door will provided. The User will provide the A/E the required height of the ceiling for forklift clearance.
- 3. The Flammable, corrosive and oxidizer storage areas will be open to each other with no fence division.
- 4. Gas Farm will be provided with no walls. A 10 ft wide roll up door will be provided.
- 5. The forklift garage area will provide space for storage and repairs.
- 6. The office area is acceptable as indicated on the drawings.
- 7. The locker rooms are to provide space for 8 men and 4 women.
- 8. A security / control cage with enclosed top will be added at the General Warehouse for Level 1 DLR material.

DATE: 14 February 2003

TIME: 1500

LOCATION: Hotel Villa Del Parco

RE: Security

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Lt. Tom Moskal	Public Works Officer	NSA La Maddalena
Charles McDuff	Facilitator	LZA
ENS J.D. Kenoyer,	Security	NSA La Maddalena
Carl Jenne	Structural Engineer	Allan & Conrad, Inc.
Charles Hutchison	Architect	RLF
Pablo Gonzalez	Electrical Engineer	RLF

ITEMS DISCUSSED:

A User Group Meeting was held for **Security**. The following was discussed:

- 1. The location and size of the security suite meets the User's requirements.
- 2. Provisions for a copy machine will be added.
- 3. AT/FP design parameters were discussed by LANTDIV and the A/E.
 - a. Type 2 55 lb explosive will be used to design the building to resist.
 - b. The waiver application will be forwarded by the A/E to NSA La Maddalena Security to complete.
- 4. The design will provide a walkway at the entire length of the roof to monitor the fence line behind the buildings.
- 5. Security does not need a wall located at the shoreline.

DATE: 14 February 2003

TIME: 1600

LOCATION: Villa Del Parco

RE: Squadron

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>		
Dianna Parish	Interior Designer	RLF		
Charles Hutchison	Architect	RLF		
Lt. Tom Moskal	Public Works Officer	NSA La Maddalena		
Pablo Gonzalez	Electrical Engineer	RLF		
Gary Farlow	Architect	LANTDIV		
Laurie Neitzke	Project Manager	LANTDIV		
David Boldt	Project Manager	RLF		
LCDR John Sager	N4	CSS-22		
Pat Miller		CSS-22		

ITEMS DISCUSSED:

A User Group Meeting was held for **Squadron**. The following was discussed:

- 1. The design will provide emergency power to the Secure Communications Room.
- 2. The space as indicated on the drawings is 2197 SF.
- 3. The A/E will combine the 2 conference rooms with an accordion door.
- 4. The design will be revised to swap the Master Chief and Administration spaces.
- 5. The floor plan was approved as indicated on the drawings.

DATE: 18 February 2003

TIME: 0910

LOCATION: Hotel Villa Del Parco

RE: Port Services

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>		
David Boldt	Project Manager	RLF		
LT Tom Moskal	Public Works Officer	NSA La Maddalena		
Bruce Farmer	PWD	NSA La Maddalena		
LTJG Jim Westermeyer	Port Services Officer	NSA La Maddalena		
Keith Sheller	P/S	NSA La Maddalena		
Laurie Neitzke	Project Manager	LANTDIV		
Pablo Gonzalez	Electrical Engineer	RLF		
Dianna Parish	Interior Designer	RLF		

ITEMS DISCUSSED:

A third User Group Meeting was held for **Port Services**. The following was discussed:

- 1. A/E to enlarge roll-up door into Boat Maintenance area to 20 feet wide.
- 2. The Engine Shop spaces are to remain open as indicated. Striping is to be painted on the concrete floor to indicate and define areas / circulation space.
- 3. A/E to provide hard ceilings (concrete) over enclosed spaces in back area of the Boat Maintenance for a storage mezzanine.
- 4. The A/E will enclose the Paint Shop and Sand Blast areas into one hard walled room with one double door entry.
- 5. The A/E has adjusted the entry into the Paint Locker to better utilize space in the Paint Shop. Paint Locker entry will be through the Paint Shop.
- 6. The Riggers Loft is to be a caged area. The A/E will provide.
- 7. The design provides the Weld Shop as an open space.
- 8. A/E will add a door into the Tool Issue room.

- 9. The Electric Shop is to remain open and is to have lockable storage cabinets. The A/E will provide.
- 10. The A/E will relocate the door into the Deck Maintenance area to the end wall adjacent to the Boat Maintenance area. The room is to remain with hard walls.
- 11. The Dunlop Repair area is acceptable as indicated on the drawings. The area is to remain open with no cage.
- 12. The A/E deleted the guest stools in the Supply Storage / Issue area. The rest of the area is acceptable as currently shown on drawings.
- 13. The A/E to follow the BUMED guide plate when laying out the Medical area.
- 14. The A/E will provide another entry door into the Conf / Training room so that second area is accessible when the room is divided into two separate areas.
- 15. The A/E will add a door to the exterior from the mechanical room.
- 16. The floor plans currently indicate two private offices near the BOSC area. The office with the window is to become a Career Counselor office for Port Services. The second office is to become a storage room for the Conference / Training room.
- 17. The A/E will investigate reducing the size of the toilet / locker rooms for BOSC in an effort to enlarge the Break room.
- 18. The Port Services office areas were acceptable as indicated on the drawings.
- 19. The CCTV / LAN room is to serve TV / PS / Office / Training and Conference room / Medical suite and Squadron areas.
- 20. The Kitchen and TV rooms were acceptable as currently shown on drawings.
- 21. The A/E to provide direct access from Bunk Rooms into their perspective locker room / shower areas.

DATE: 18 February 2003

TIME: 1000

LOCATION: Hotel Villa Del Parco

RE: MWR

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	Organization	
David Boldt	Project Manager	RLF	
LT Tom Moskal	Public Works Officer	NSA La Maddalena	
Bruce Farmer	PWD	NSA La Maddalena	
Harry Nothstein	MWR	NSA La Maddalena	
Laurie Neitzke	Project Manager	LANTDIV	
Pablo Gonzalez	Electrical Engineer	RLF	
Dianna Parish	Interior Designer	RLF	

ITEMS DISCUSSED:

A third User Group Meeting was held for **MWR**. The following was discussed:

- 1. The design to provide an elevator that will accommodate load and space requirements for the weights and cardio equipment, as well as appropriate building clearances with in the BEQ corridors.
- 2. A/E to provide doors directly into weight room off of BEQ corridor.
- 3. The A/E indicated that pass-card access for the BEQ users directly into the weight and cardio areas for after hours use could be provided. Concern was expressed that there would be no one on duty in the MWR facility to monitor in case of emergency. The idea would be evaluated further by the User.
- 4. The A/E expanded stage in the dining area floor area to include four tables.
- 5. A/E added a space for a microwave at end of check-in counter in Fleet Recreation area.

DATE: 18 February 2003

TIME: 1300

LOCATION: Hotel Villa Del Parco

RE: Safety

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>	
Dianna Parish	Interior Designer	RLF	
David Boldt	Project Manager	RLF	
Brad Cain	Mechanical / Plumbing / Fire	RLF	
Chris Epps	NSA Safety	NSA La Maddalena	
Bev Maki	NSA Safety	NSA La Maddalena	

<u>ITEMS DISCUSSED</u>:

A third User Group Meeting was held for **Safety**. The following was discussed:

- 1. The User occupies one private office in new the facility. The layout is acceptable as currently indicated on drawings.
- 2. The User is to provide the A/E with information regarding Italian fire fighting capabilities.

DATE: 18 February 2003

TIME: 1400

LOCATION: Hotel Villa Del Parco
RE: Environmental Follow-up Meeting

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>
Charles Hutchison	Architect	RLF
Daniel Jordan	Environmental	NSA La Maddalena

ITEMS DISCUSSED:

The discussion related to identification of location of asbestos and contaminated soil. Mr. Jordan provided Charles Hutchison with a drawing that provided guidance on these identified locations.

DATE: 18 February 2003

TIME: 1445

LOCATION: Hotel Villa Del Parco

RE: BOSC

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>		
Dianna Parish	Interior Designer	RLF		
Rick Newberg	BOSS Contractor	GEMMO/W/S		
Lucio Valle	BOSS Contractor	GEMMO/W/S		
LT Tom Moskal	Public Works Officer	NSA La Maddalena		
Pablo Gonzalez	Electrical Engineer	RLF		
ENS Jennifer Cheswick	PWD Site Officer	NSA La Maddalena		
David Boldt	Project Manager / Architect	RLF		
Brad Cain	Mechanical/Plumbing/Fire Engr.	RLF		

ITEMS DISCUSSED:

A third User Group Meeting was held for **BOSC** and **Public Works**. The following was discussed:

BOSC areas:

- 1. The A/E indicated that they would minimize size of toilet / locker rooms and increase size of break room if possible. Male locker room requires two showers, two urinals, one toilet and 35 lockers. Female locker room requires one shower, one toilet and two lockers.
- 2. A/E to relocate door to private office to pass between it and open office area.
- 3. A/E to show window in wall dividing private office and open office area.
- 4. Provide air conditioning to storage area if possible.

Public Works suite:

1. All areas are acceptable as currently shown on drawings.

DATE: 18 February 2003

TIME: 1530

LOCATION: Hotel Villa Del Parco

RE: Supply / HAZMAT

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>		
Dianna Parish	Interior Designer	RLF		
Vince Diega	T-Shed LPO	Supply / HAZMAT		
David Boldt	Project Manager / Architect	RLF		
LT Tom Moskal	Public Works Officer	NSA La Maddalena		
Brad Cain	Mechanical/Plumbing/Fire Engr.	RLF		

<u>ITEMS DISCUSSED</u>:

A third User Group Meeting was held for **Supply / HAZMAT**. The following was discussed:

- 1. The A/E to add additional overhead roll up door to the exterior in the HAZMAT Processing room.
- 2. All areas were approved as shown and sign-off obtained.

DATE: 18 February 2003

TIME: 1600

LOCATION: Hotel Villa Del Parco

RE: BEQ

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>	
Diana Parish	Interior Designer	RLF	
Pablo Gonzalez	Electrical Engineer	RLF	
David Boldt	Project Manager / Architect	RLF	
SKC Carolina Navarro	Acting SUPPO	NSA La Maddalena	
		<u> </u>	

ITEMS DISCUSSED:

A third User Group Meeting was held for **BEQ**. The following was discussed:

- 1. A/E to add ironing board back into each room as collateral equipment.
- 2. The User indicated that sharing laundry room with MWR was acceptable, but was going to request in writing from them that they would handle the responsibility of maintaining the machines.
- 3. The A/E confirmed that MWR would only pass through the corridor to move in and out fitness equipment when needed.

DATE: 18 February 2003

TIME: 1630

LOCATION: Hotel Villa Del Parco

RE: Security

ATTENDEES/PARTICIPANTS:

<u>Name</u>	<u>Function</u>	<u>Organization</u>		
Diana Parish	Interior Designer	RLF		
ENS Joe Kennoyer	Security	NSA La Maddalena		
David Boldt	Project Manager	RLF		
LT Tom Moskal	Public Works Officer	NSA La Maddalena		

<u>ITEMS DISCUSSED</u>:

A third User Group Meeting was held for **Security**. The following was discussed:

- 1. Raised computer flooring will be added in Equipment, Manning Post and Storage areas.
- 2. All areas are acceptable as currently shown on drawings.



PROJECT WATERFRONT RECAPITALIZATION-SANTO STEFANO FY04 MCON Project No. 995, Naval Support Activity La Maddalena, Italy

Function Analysis Concept Development

PRESENT WORTH OF COST SAVINGS

ALT. NO.	DESCRIPTION	ORIGINAL COST	ALTERNATIVE COST	INITIAL COST SAVINGS	RECURRING COST SAVINGS	TOTAL PW LCC SAVINGS
CIVIL	(C)					
C-1	Resite the buildings to minimize rock removal	\$380,000	\$0	\$380,000		\$380,000
C-2	Redesign/simplify sanitary sewer system	\$210,000	\$0	\$210,000	\$197,324	\$407,324
МЕСН	ANICAL (M)					
M-1	Eliminate one of two elevators	\$40,000	\$0	\$40,000	\$55,984	\$95,984
ELECT	CRICAL (E)					
E-1	Eliminate frequency converter	\$107,520	\$0	\$107,520	\$33,147	\$140,667



PROJECT: WATERFRONT RECAPITALIZATION – SANTO STEFANO

· 1

FY04 MCON Project No. 995, Naval Support Activity La Maddalena, Italy

Function Analysis Concept Development

C-1

ALTERNATIVE NO.:

DESCRIPTION: **RESITE THE BUILDINGS TO MINIMIZE ROCK REMOVAL** SHEET NO.: 1 of 1

ORIGINAL DESIGN:

Building placement in the original concept would require removal of a large amount of rock at the southwest corner of the site to accommodate a full size gymnasium at the west end of the Gymnasium / Port Services / Warehouse complex

ALTERNATIVE:

Relocate the Central Energy Building out of the line of buildings as shown in Concept 1 and re-site the Fitness / BEQ / Dining/Fleet Recreation building to avoid the large rock outcropping at the southwest corner of the property.

ADVANTAGES:

- Lower initial construction costs
- Minimizes site impact and eliminates the need to obtain approval from the Italian National Park System for removal of the major rock outcropping

DISADVANTAGES:

 Requires additional phasing to provide additional storage for Conex containers and to accommodate port services continuing operations

DISCUSSION:

The Parco Nazionale Arcipelago di La Maddalena administration is very sensitive to any rock removal from any of the island in the archipelago. The construction can be accomplished without removal of the rock outcropping if the Central Energy Building is moved out of the line of building presented in the original concept. Phasing of the project to use Port Service's open storage and staging space by as the new site for the Central Energy Building will allow this change. Port Service's storage and staging needs will be accommodated during all of the construction period.

Note: Cost savings below are taken from the Designer's Estimate.

COST SUMMARY	INITIAL	COST	PRESENT WORTH RECURRING COSTS	PRESENT LIFE-CYC	_
ORIGINAL DESIGN	\$	380,000	\$	\$	380,000
ALTERNATIVE	\$		\$	\$	
SAVINGS	\$	380,000	\$	\$	380,000



PROJECT: WATERFRONT RECAPITALIZATION – SANTO STEFANO

ALTERNATIVE NO.:

FY04 MCON Project No. 995, Naval Support Activity La Maddalena, Italy

C-2

Function Analysis Concept Development

DESCRIPTION: Redesign / Simplify Sanitary Sewer System

SHEET NO.: 1 of 2

ORIGINAL DESIGN:

The original design for the sanitary sewer system anticipated tapping into the existing system. The existing system has 7 lift stations on the site.

ALTERNATIVE:

The new design consolidates and simplifies the system to reduce the number of lift stations from 7 to 2.

ADVANTAGES:

DISADVANTAGES:

- Lower life cycle costs
- Fewer lift stations
- Lower operation costs
- Obviates replacement of pumps nearing the end of their useful lives.

• Requires more excavation during construction

DISCUSSION:

The new design will simplify the system and reduce the operating costs. Maintenance and operating costs are assumed to be 5% and 2% of initial equipment cost (\$134,535) because of the harsh service environment of sewage and a high percentage of salt water from the Cold Iron utilities. Four of the existing pumps are 22 years old and replacements of these pumps will be avoided since they are eliminated from the new design. Connected horsepower drops from 27.5 to 15 (not including stand-by pumps and motors) Power cost is estimated to be \$160/hp/year for this application and service.

COST SUMMARY		INITIAL COST		INITIAL COST		INITIAL COST		PRESENT WORTH RECURRING COSTS		PRESENT WORTH LIFE-CYCLE COST	
ORIGINAL DESIGN	\$	210,000	\$	235,330	\$	448,199					
ALTERNATIVE	\$	0	\$	40,875	\$	40,875					
SAVINGS	\$	210,000	\$	197,324	\$	407,324					

LIFE CYCLE COST WORKSHEET



PROJECT: WATERFRONT RECAPITALIZATION - SANTO STEFANO

FY04 MCON Project No. P-995

Naval Support Activity, La Maddalena, Sardinia, Italy

Function Analysis Concept Development

ALTERNATIVE NO.

C-2

SHEET NO.

2 of 2

			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					SHEET NO.	2 of 2
LIFE	CYC	CLE PERIOD:	25	years					
INTI	INTEREST RATE: 3.20% ESCALATION					0.00%		ORIGINAL	PROPOSED
A. INITIAL COST								210,000	-
	Use	ful Life (Years)							
				210,000					
В.	REC	URRENT COST							
	1.	Maintenance	6,727						
	2. Operating \$2 % of equipment costs							2,691	
	3. Energy \$160 /hp/year 27.5 hp original, 15 hp new design							4,400	2,400
	4.								
	5.								
	6.								
						Total A	Annual Costs	13,817	2,400
						Present	Worth Factor	17.0314	17.0314
				Pr	esent Wo	rth of RECURI	RENT COSTS	235,330	40,875
C.	SING	GLE EXPENDIT			Year	Amount	PW factor	Present Worth	Present Worth
ORIG	PROP			original design or p				Ī	
X				nps and motors	3	2,000	0.9098	1,820	-
X				nps and motors	20	1,000	0.5326	533	-
X		_	ent of 2 pun	nps and motors	21	1,000	0.5161	516	-
		4.					1.0000	-	-
		5.					1.0000	-	-
		6.					1.0000	-	-
		7.					1.0000	-	-
	8. 1.0000								-
D.	D. SALVAGE VALUE				Year	Amount	PW factor	Present Worth	Present Worth
		1.					1.0000	-	-
		2.				of SINGLE EX	1.0000	-	-
			2,869	-					
E.	Tota	I Recurrent Co	238,199	40,875					
				197,324					
				TOTAL		IT WORTH C		448,199	40,875
1				407,324					



PROJECT: P-995 – WATERFRONT RECAPITALIZATION, SANTO STEFANO

Value Management

ALTERNATIVE NO.:

M-1

DESCRIPTION: **ELIMINATE ONE OF TWO ELEVATORS** SHEET NO.: 1 of 3

ORIGINAL DESIGN:

The original design calls for two elevators.

ALTERNATIVE:

One of the two elevators is to be eliminated.

ADVANTAGES:

- Initial cost savings
- Will minimize hydraulic fluid leakage
- Will reduce life cycle costs

DISADVANTAGES:

Minimal redesign

DISCUSSION:

Elimination of the elevator will help make it possible to accomplish all of the goals of the buildings while staying within the GSM limits spelled out in the DD 1391. The one elevator remaining was and will continue to be an industrial elevator in load carrying capacity. Handicap access is preserved with the one elevator.

COST SUMMARY		INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST	
ORIGINAL DESIGN	\$	40,000	\$ 55,984	\$	95,984
ALTERNATIVE	\$	0	\$ 0	\$	0
SAVINGS	\$	40,000	\$ 55,984	\$	95,984



PROJECT: P-995 WATERFRONT RECAPITALIZATION - Santo Stefano

Value Management

ALTERNATIVE NO:

M-1

DESCRIPTION: SHEET NO. 2 of 3

DESCRIPTION:			SHEET NO. 2 01 3						
CONSTRUCTION ITEM	C	RIGINAL EST	ГІМАТЕ	PROPOSED ESTIMATE					
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL		
Elevator									
installation	LS	1	7,200	7,200					
materials	LS	1	32,800	32,800					
Sub-total				40,000					
Mark-up at included						-			
TOTAL				40,000					

LIFE CYCLE COST WORKSHEET



P-995 WATERFRONT RECAPITALIZATION PROJECT: ALTERNATIVE NO Santo Stefano Value Management SHEET NO. 3 of 3 LIFE CYCLE PERIOD: 25 years 3.20% **ESCALATION RATE:** 0.00% **ORIGINAL PROPOSED INTEREST RATE:** A. INITIAL COST 40,000 **Useful Life (Years)** 25 40,000 **INITIAL COST SAVINGS RECURRENT COSTS (Annual Expenditures)** Maintenance 5% of first cost each year = $$40,000 \times 0.05$ 2,000 2. **Operating** 3. **Energy** 4. Note: no energy cost savings calculated since load will shift to other elevator 6. **Total Annual Costs** 2,000 **Present Worth Factor** 17.0314 17.0314 **Present Worth of RECURRENT COSTS** 34,063 SINGLE EXPENDITURES Year **Amount PW** factor **Present Worth Present Worth** ORIG PROP < Put "x" in appropriate box (original design or proposed design) Refurbish 8,000 0.8543 6,834 X Refurbish 10 8,000 0.7298 5,838 Х 3. Refurbish 8,000 0.6235 4,988 X 15 4. 20 8,000 0.5326 4,261 X Refurbish 5. Cost = 20% of first cost 1.0000 6. 1.0000 1.0000 8. 1.0000 **SALVAGE VALUE** Year **Amount** PW factor **Present Worth Present Worth** 1. 1.0000 2. 1.0000 **Present Worth of SINGLE EXPENDITURES** 21,921 Total Recurrent Costs & Single Expenditures (B + C) 55,984 **RECURRENT COSTS & SINGLE EXPENDITURES SAVINGS** 55,984 **TOTAL PRESENT WORTH COST (A + D)** 95,984 **TOTAL LIFE CYCLE SAVINGS** 95,984



PROJECT: WATERFRONT RECAPITALIZATION - SANTO STEFANO

FY04 MCON Project No. 995, Naval Support Activity La Maddalena, Italy

Function Analysis Concept Development

ALTERNATIVE NO.:

F-1

ELIMINATE FREQUENCY CONVERTER SHEET NO.: 1 of 2 DESCRIPTION:

ORIGINAL DESIGN:

The original design specified a three-phase frequency converter to supply the proper power to Port Services and the berthing pier.

ALTERNATIVE:

The frequency converter can be eliminated and power at the correct voltage and frequency can be supplied from the existing substation 4. Eliminating the need for the frequency converter eliminates the need for enclosed space to house this electrical equipment. This will free up space to help meet the space requirements of the users basic functions.

ADVANTAGES:

DISADVANTAGES:

- Lower initial cost
- Lowers energy requirements
- Frees up space that can be used to meet the basic functions of end users resulting in greater net square footage.

DISCUSSION:

The program calls for a maximum of 8091 GSM for the project. Space that would be used for the converter will be freed up for basic user functions, resulting in greater net square footage. The equipment cost plus annual estimated operating and maintenance costs will be eliminated. (Assumed annual maintenance and operating costs total 1.5% of initial equipment cost. Energy cost is the power consumed by the device. The frequency converter has an efficiency of greater that 95 %, implying a power cost to convert the frequency of approximately 5% of the connected load. For LCC calculation, power consumption from the frequency is assumed to be 3%.or approximately 6000 kwh annually at \$0.08/kwh.)

COST SUMMARY		INITIAL COST	PRESENT WORTH RECURRING COSTS			PRESENT WORTH LIFE-CYCLE COST	
ORIGINAL DESIGN	\$	107,520	\$	33,147	\$	140,667	
ALTERNATIVE	\$	0	\$	0	\$		
SAVINGS	\$	107,520	\$	33,147	\$	140,667	

LIFE CYCLE COST WORKSHEET



PROJECT: WATERFRONT RECAPITALIZATION - SANTO STEFANO

FY04 MCON Project No. P-995

ALTERNATIVE NO. E-1

Naval Support Activity, La Maddalena, Sardinia, Italy

Function Analysis Concept Development

SHEET NO.

2 of 2

S S									2 of 2
LIF	E CYCI	LE PERIOD:	25	years					
INT	INTEREST RATE: 3.20% ESCALATION					0.00%		ORIGINAL	PROPOSED
A.	INITIA	AL COST		107,520	-				
	Usefu	ıl Life (Years)							
				107,520					
В.	RECU	JRRENT COST							
	1.	Maintenance		1% of equipment	cost			978	-
	2.	Operating		0.5% of equipme	ent cost			489	-
	3. Energy 6000 KWH @ 0.08						\$\\$/KWH	480	
	4.								
	5.								
	6.								
						Total	Annual Costs	1,946	-
						Present	Worth Factor	17.0314	17.0314
				P	resent Wo	rth of RECUR	RENT COSTS	33,147	-
C.		LE EXPENDIT			Year	Amount	PW factor	Present Worth	Present Worth
ORIG	1 1		propriate box	(original design or p	roposed de	esign) I	1 0000	I	Π
	+ +	1.					1.0000	-	-
		2.					1.0000	-	-
	+ +	3.					1.0000	-	-
	+-+	4. -					1.0000	-	-
	+ +	5.					1.0000	-	-
		6.					1.0000	-	-
		7.					1.0000	-	-
_	<u> </u>	8. (ACE VALUE			Vaar	A	1.0000 PW factor	- Dues and Marth	Dungant Month
D.	1 1	AGE VALUE			Year	Amount		Present Worth	Present Worth
	-	1.			+		1.0000	-	-
	1 1	2.	-	-					
_	Total	Poolingent Co	22 147	-					
Ε.	ıotal	Recurrent Co		ENT COSTS & S		/DENIDITURE	C CAVINGE	33,147	22 147
			KECUKK			IT WORTH C		140,667	33,147
			140,007	140.667					
				140,667					